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The Fiber Flax and Linen Industry in Oregon

Growing Placed on Scientific Basis in Willamette Valley—Two Manufacturing Projects Launched—Real Chance for Expansion Both in Fiber Production and Goods Manufacture—Resume of Important Developments in the Industry in Recent Years

By Colonel W. B. Bartram

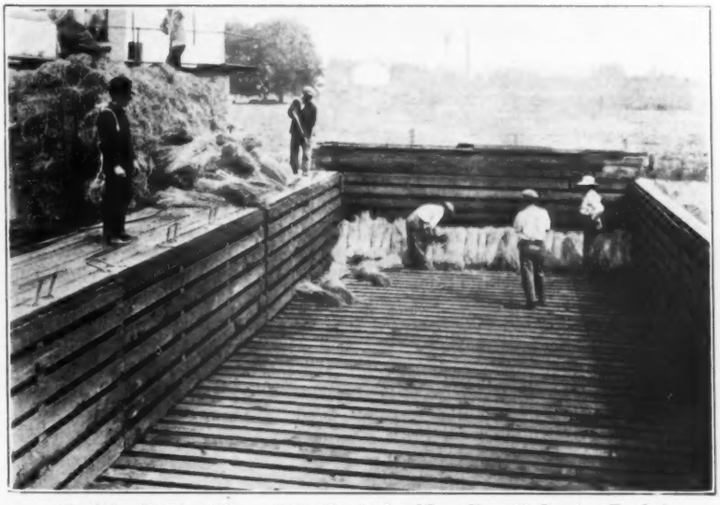
WITH two manufacturing projects launched within the last year in Salem and with fiber flax growing in the Williamette Valley placed on a scientific basis this season with relation to seeding, testing and grading, the Oregon flax industry has reached an actually commercial status with successive years of growth looming ahead. The years have seen a crystallization of the efforts of those who have pioneered the industry and the years 1925 and 1926 form one of the epochal points in the development of Oregon flax.

There are four epochal points in the development of the industry, the first being some 50 years ago when a few samples of Oregon fiber were exhibited at the Centennial Exposition in Philadelphia, where it won first prize over all flax fiber exhibited from Europe and the United Kingdom. From that time on small parcels were grown by public spirited citizens with a view of interesting capital to launch into this industry in a commercial way.

The second point was the winter of 1915 when the Legislature appropriated $50,000 to start the State Flax Industry. In 1923 a further sum of $100,000 was set aside to increase the operations of this industry. Since that time further sums have been advanced until today the State Flax Industry's assets total about $300,000.

The third point was when a flax-pulling machine was introduced into the Willamette Valley in 1923. Capitalists had taken the position that there was no future in this industry agriculturally until a machine was available to pull the flax. Flax for fiber purposes must be pulled rather than cut, and this operation for ages has been done by hand, and, until this laborious and costly operation could be overcome, it was considered out of the question to develop the flax industry in Oregon.

The average cost of pulling an acre of flax by hand labor in this State is about $25.00. Even at this figure the number of acres that could be harvested by hand labor would never reach a sufficient volume to warrant

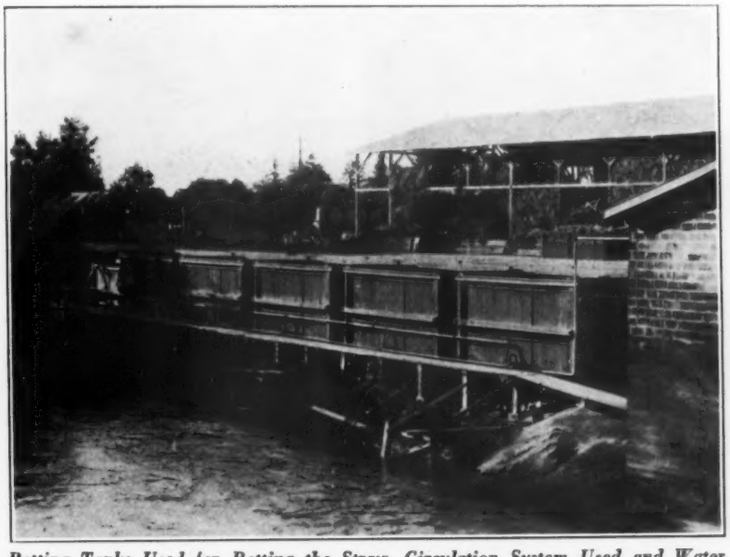


Tank for Retting Flax. (This Particular Plant Uses 13 Retting Tanks)

building up the industry from flax grown in the United States.

As a contribution toward the development of this industry the State and the Portland Chamber of Commerce in 1924 joined in purchasing 12 flax-pulling machines which were sold to the flax growers on easy term payments. The use of these flax-pulling machines will reduce the cost of pulling flax to a fraction of the cost of hand pulling and permit the growing of unlimited acreage.

With the advent of this machine the way was opened up to take every advantage of the natural and necessary conditions afforded by the climate and soils of this State in the development of the flax crop. These machines will be to the flax industry what the gin-mill was to the cotton industry.



Retting Tanks Used for Retting the Straw, Circulation System Used and Water About 82° Temperature

Bumper Crops This Year

The fourth point was bumper crops this year which were the response to early sowing on selected soils by farmers under competent supervision. This past season over 2,000 acres were planted to fiber flax with encouraging increase in tonnage and fiber content over last year. Six counties of Oregon are now interested in growing this crop and latest advices indicate that other counties intend to contract this year. We consider fiber flax a valuable cash crop, many of our farmers netting more from their flax than from any other cereal crop. It is grown under contract at fixed prices before the seed is planted. It is a crop that encourages rotation with increasing results to other crops and the demand for the raw product produced in this country is very much in excess of the supply.

Every effort is being directed toward the growing of quality crops to meet the increasing demands and requirements of the industry. We find that we cannot profitably produce line fiber from short straw. On the other hand, with long straw of fine quality with a heavy yield of fiber we can hold our own in the markets of the world.

In our State the linen industry is working toward a balanced development, a development which will bring success to the farmer as well as to the manufacturer. This development calls for strong cooperation from all concerned. The effort is really worth while because of the pressing need of our farmers for diversification in cash crops and in the development of new industries. In view of all the circumstances it would seem that we cannot afford to spend huge sums abroad to pay for fiber flax and fiber products, that are imported, when we can produce as good or better in our own country from lands, operated by

American labor, along the Pacific and Atlantic coasts and the Great Lakes.

Opportunity for Expansion

When it is considered that less than 3,500 acres of fiber flax were grown in the United States the last year which will produce only about 600 tons of fiber and spinning tow and that we imported during the last fiscal year 6,843 tons, one can readily see what it would mean to our farmers and to our industrial pay-rolls were we producing our own requirements in this raw product. The foreign manufactured "bread and butter lines" imported into this country if produced here would require us to increase the production of the raw product, over our present imports, ten fold.

Last year the first spinning mill was completed. This mill which is located in Salem has been running successfully manufacturing fish-net twines and shoe threads. It consumes in one shift about 90 tons of line fiber per year. The machinery throughout is all new and the most modern obtainable. The company proposes increasing the output of this mill at an early date by installing additional machinery and working the plant to its fullest capacity.

With the exception of two small parcels, all the flax consumed by this plant during the past year was grown and processed in Oregon.

Linen Manufacture

A year ago the second linen mill was organized with an authorized capital of $600,000. This mill is also located in Salem. The main building covers over an acre of land and is considered one of the finest factory buildings on the Pacific Coast. The other buildings such as boiler house, office, warehouse, and stock-room cover as much more land. The first unit of the spinning mill will consist of 1400 spindles, both wet and dry. Every spindle will be gear driven and every machine individually motor driven. This unit will consume 1,600 pounds of line fiber and tow every 48 hours. It is the company's intention to put the mill on three shifts as soon as the mill is running smoothly.

The weaving department will start with 60 looms, some of which will be automatic. Provision has been made for installing 60 additional looms just as soon as conditions will warrant. This department will be complete in every respect with bleaching, finishing and sewing equipment. This company proposes to start manufacturing low count yarns and to weave crashes, towels, toweling, linings and glass-checks. This plant will produce an all American product from flax grown, processed, spun, woven and finished in the United States.

As the United States is the largest market in the World for linens and fiber flax products, and as we have many areas where fiber flax can be successfully grown, it would appear reasonable to expect that this industry has a broad and successful future before it.

Field of Wigwamed Flax Drying After Being Taken Out of the Tanks

Carders' Meeting at Charlotte

Principal Topic of Discussion Was Breaking Strength of Yarn

A meeting of the Carders' Division of the Southern Textile Association was held last Wednesday at the Southern Manufacturers' Club, Charlotte, N. C. J. O. Corn, chairman of the Carders' Division, presided.

The breaking strength of yarns was the principal topic of discussion. The relation of the carding process to the strength of the yarn was developed by the various members present, who related their personal experiences as enlightenment upon the subject. Various tests were submitted and the answers to the questionnaire which was sent out on the subject prior to the meeting were tabulated.

About 200 were present who divided into groups according to the counts of yarn with which they were most familiar. Luncheon was served at Efird's Department Store and the audience saw three vaudeville acts.

Cotton Goods for January

Production and Unfilled Orders Show Increase

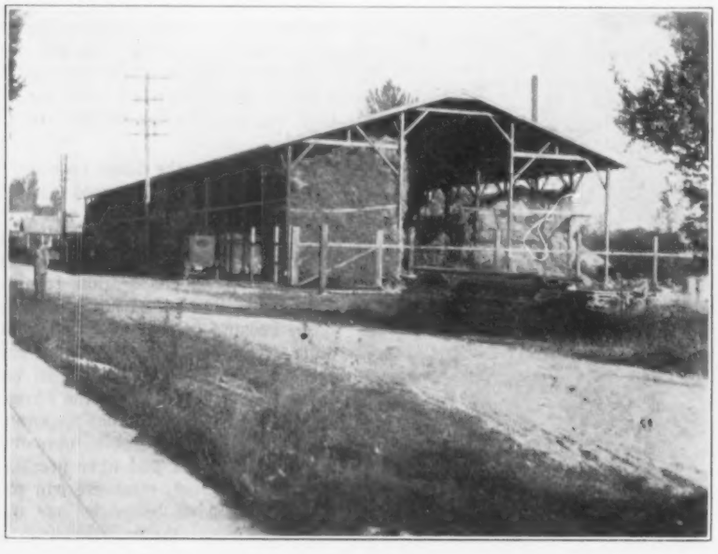
WASHINGTON, D. C.—Production of cotton goods in January mounted to a level exceeding by a wide margin the output in the preceding month and in the corresponding month of 1926, according to the report furnished to the Department of Commerce by the Association of Cotton Textile Merchants of New York.

Unfilled orders at the end of the month were 40% larger than at the close of December, while stocks were considerably lower.

All classes of goods showed a gain in production during January as compared to the December output, and unfilled orders for all kinds, except pajama checks ran much higher. Sheetings, print cloth, colored goods and osnaburgs showed the greatest increase in demand.

The report made public by the Department of Commerce follows:

Items	Dec., 1926	Jan., 1927	Jan., 1926
Cotton Goods:			
Total (9 classes):			
Production	199,578	242,208	229,453
Stocks, end of month	210,122	184,603	220,486
Unfilled orders, end of month.	274,715	386,795	279,025
Sheetings:			
Production	51,853	62,970	57,015
Stocks, end of month	52,399	41,980	31,105
Unfilled orders, end of month.	51,438	91,786	64,378
Print cloth:			
Production	59,472	78,467	80,835
Stocks, end of month	36,448	27,555	29,996
Unfilled orders, end of month.	82,088	108,457	86,696
Pajama checks:			
Production	8,008	8,820	4,796
Stocks, end of month	4,185	4,957	921
Unfilled orders, end of month.	16,489	14,818	7,080
Drills and twills (40 in. and narrower,:			
Production	9,842	12,677	17,136
Stocks, end of month	13,368	12,882	17,072
Unfilled orders, end of month.	10,131	18,081	14,811
Pocketing twills and jeans:			
Production	3,068	3,974	4,298
Stocks, end of month	1,122	580	7,091
Unfilled orders, end of month.	3,131	5,987	3,309
Osnaburgs:			
Production	7,936	10,912	7,199
Stocks, end of month	2,549	2,115	8,357
Unfilled orders, end of month.	14,741	22,905	16,429
Heavy warp sateens:			
Production	1,697	2,229	1,587
Stocks, end of month	502	653	1,219
Unfilled orders, end of month.	1,677	2,691	1,384
Drills, twills, sheetings, and sateens (wider than 40 in.):			
Production	5,208	5,661	6,851
Stocks, end of month	9,075	8,968	1,586
Unfilled orders, end of month.	10,072	12,079	19,052
Colored goods:			
Production	52,494	56,498	49,736
Stocks, end of month	90,474	84,913	123,139
Unfilled orders, end of month.	84,948	109,991	65,886



Type of Straw Shed Used. Size 208 x 54 Ft. Holds About 500 Tons of Flax Fiber

One Side of Scutching Mill Where Retted Straw Is Converted Into Line Fiber. This Is the Largest Scutching Mill in North America

Pulverized Coal at Ponemah Mills

Height of No. 2 Boiler House Increased and Two Powdered Fuel Units Installed—One Man Will Probably Be Able to Operate Both at 2,000 H.P. Total Output—Fires Started With Oil—Two More Units to be Added When Further Replacements Are Necessary

*By Warren B. Lewis**

THE growth of public utility power plants from a few hundred horsepower to many thousands brought about very radical changes in their boiler plants. The most important results of the research and experimental work carried on was the discovery that a boiler could be operated at several times its normal rating with very little loss in efficiency, and in fact that its best efficiency was at considerably higher ratings than normal.

A few years ago the writer contributed an article to TEXTILE WORLD calling attention to the fact that the rating of a boiler on the basis of ten square feet of heating surface per horsepower meant nothing whatever in actual practice and was simply a relic of tradition, and that the proper rating of a boiler was the number of heat units which it would convert from fire to water at the highest efficiency. The modern public utility operates its boilers at approximately twice the normal rating, or on the basis of five square feet per horsepower instead of ten, and for peak load purposes at frequently three times rating. One of the large public utility plants in New York operated one of its boilers experimentally at 700% of rating and found that the limit of operation was not in the boiler itself but in the furnace and the equipment for firing the fuel. No public utility would consider for a moment the installation of boiler equipment to be operated at normal rating, not only from the standpoint of first cost but from that of the cost of a thousand pounds of steam developed.

Industrial Plant Tendencies

The influence of public utility practice is gradually being felt in industrial plants; and the tendency in recent years has been to adopt some of the methods, at least, to be found in public utility plants, with due consideration given to the different character of load.

With the exception of comparatively few industrial plants which have been more or less modernized, it is safe to state that industrial boilers have been installed and have been operated on the basis of ten square feet per boiler horsepower, at efficiencies between 60% and 65% and at a labor cost of from $3.50 to $5.00 per horsepower per year. In many of these plants an increase of 10% in the efficiency of the boiler unit would have entirely wiped out the cost of labor.

The limiting feature in the old boiler plant was not in the boiler but in the way in which it was set. These old boilers could have been operated at very much higher ratings and with equally good efficiency if it had been possible to burn the fuel under them with a maximum conversion of heat units in the fuel. It is true that there has been some advance in boiler design, but this has been more in the nature of the materials used than in any changes that have rendered the boiler itself a more efficient piece of apparatus for transferring heat units from fire to water.

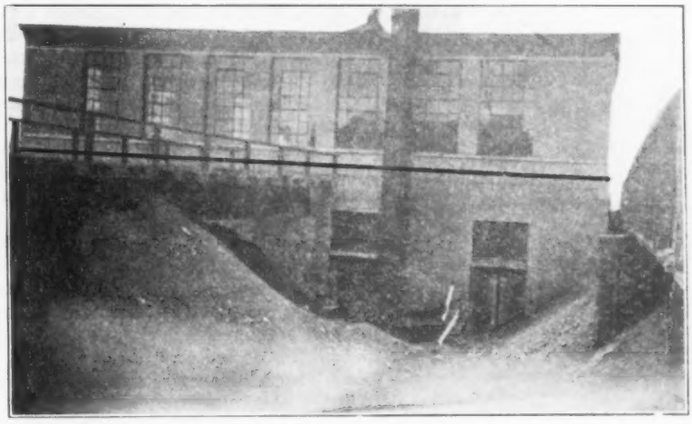


Fig. 1. Front of Boiler House Showing Coal Elevator; Black Line Indicates Old Roof Level

Mechanical Methods

The introduction of mechanical methods of firing coal has brought about a saving in labor cost but made it necessary to redesign boiler settings in order to take full advantage of these mechanical appliances. The keynote in increasing the output of a boiler and obtaining high efficiency and high rating has been in the design of the furnaces so that complete combustion of the fuel could take place.

With the introduction of powdered coal as a method of firing, this increase in furnace volume became more important, so that modern furnaces are two to five times as great in volume as the space occupied by the boiler itself. The higher the rating at which the boiler is to be operated, the greater must be the volume of the furnace so that the increased amount of coal fired will be completely consumed before the high temperature gases reach the boiler surfaces. The modern industrial boiler plant should be designed on the basis of operating boilers at not less than 150% of rating continually, and 200% of rating if need be.

The older type of industrial boilers were seldom larger than 250 h.p., as it is practically impossible to fire larger boilers by hand; and there are probably more 150 h.p. boilers in actual use than larger sizes. There are many old industrial boiler plants developing 1000 h.p. of steam in which there are eight or ten boilers and three or four men employed to fire them and haul coal. A modern boiler plant of 1000 h.p. should be limited to three boilers, and no more than this would be required up to 2000 h.p. With modern appliances for firing and handling coal, two men can operate up to 2000 h.p. and do very little physical work.

The description which follows is that of a cotton mill boiler plant which has been modernized in accordance with the general principles set forth in the foregoing, and may have some

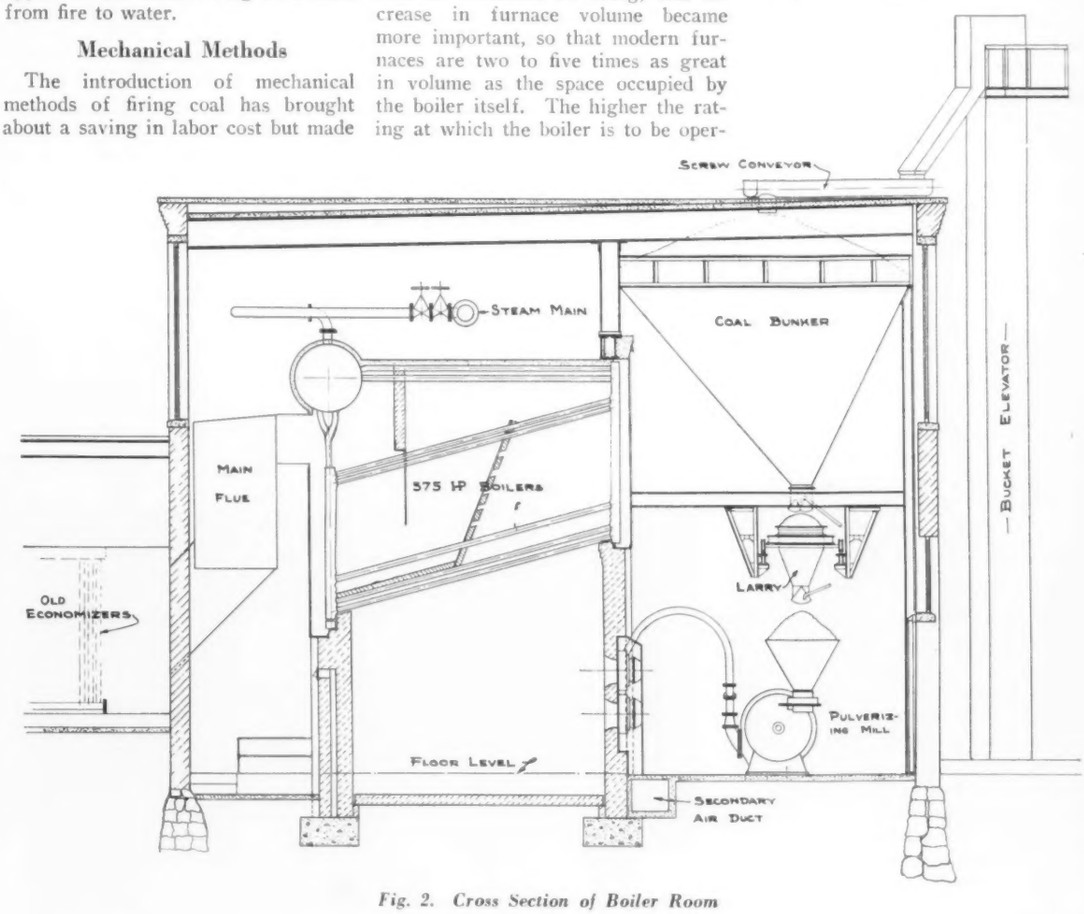


Fig. 2. Cross Section of Boiler Room

* Consulting Engineer, 740 Grosvenor Building, Providence, R. I.

special interest on account of the method employed for firing the boilers.

The Ponemah Mills

The Ponemah Mills at Taftville, Conn., have for a number of years operated two boiler plants known as No. 1 and No. 2, in each of which were six water-tube boilers hand fired, and set in the familiar way of about 4 ft. from the grates to the lower row of tubes. At this mill is a water power development of a maximum of 2500 h.p. which in periods of extreme low water can be operated at 500 h.p. It has been necessary, therefore, to maintain a standby steam plant in connection with the No. 1 mill, the output of which would depend upon the number of water wheels in operation. The No. 1 boiler plant was in constant operation furnishing steam for heating and the processes incidental to the manufacture of cotton goods. At the No. 2 plant steam power units were in operation continuously to furnish power in excess of that developed by the water wheels, and a limited amount of power could be transferred from this steam power plant to the No. 1 mill. Boilers in the No. 2 plant were operated continuously with a smaller variation in output than in the No. 1 plant.

A study of the actual amount of work done in each of these boiler plants developed the belief that by tying the two plants together with a long steam line the No. 2 plant could carry the entire steam load for a considerable portion of the year, and the No. 1 plant held purely as a standby boiler plant for use when water power was gradually decreasing. This plan of operation was followed for a period of time with a considerable decrease in the labor cost and very material decrease in the amount of coal consumed.

The efficiency of the No. 2 boiler plant was no more and no less than would be expected with any hand-fired boilers carefully fired and well maintained. Four of the boilers in the No. 2 plant were approaching the end of their useful life; and, cracks having developed in the drums, the problem was presented of either replacing these boilers with others of a similar nature and set in the same way, or of adopting an entirely new plan, starting on a program more in the line of modern practice.

Pulverized Fuel

It was finally decided to install two boilers to be fired with pulverized fuel on the unit system, these two boilers to be capable of carrying the entire load of the mill, not only when the full water power was available but with an increasing load as water power failed, so that it would not be necessary to operate the No. 1 boiler plant except for a short period of time when water was at a minimum. It was further decided that it would be unwise to ever replace units in the No. 1 boiler house, and that when it became necessary to abandon those boilers, two more units should be installed in the No. 2 boiler house, so that there would eventually be four large units, mechanically fired and carrying the entire load of the mill under any circumstances.

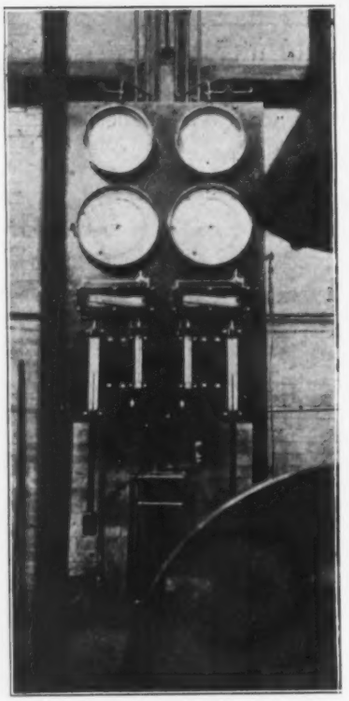


Fig. 3. Control Panel, Containing Boiler Gauges, CO_2 Indicators, Draft Gauges, and Flow Meters

The No. 2 boiler house was approximately 50 ft. x 80 ft., ground dimension, which provided ample floor space, but insufficient height. Fig. 1 is a front view, and the black horizontal line indicates the original roof line.

The old roof was removed, the four walls carried up 16 ft., and a new flat roof of concrete on steel beams substituted, giving a clear height from floor to roof of 38 ft.

The floor space required for two new boilers was but little more than that of two of the old boilers, the new boilers having a continuous rating of 1650 h.p. as against 600 h.p. for two old boilers. The actual floor space for the old was .6 sq. ft. per h.p. and ⅓ sq. ft. per h.p. for the new. The design provided for operating the new boilers up to 150% of rating for as many hours as might be necessary and up to 200% of rating during periods of low water.

Boiler Design

The boilers are Babcock & Wilcox cross drum type, set with the front header 16 ft. above the furnace floor, and the baffling and tubes so arranged that no bridge wall is necessary. This gives a clear furnace below the tubes 18 ft. in length, 9 ft. 2 in. in width, and varying from 16 ft. in the front to 12 ft. in the rear, a total volume of about 2200 cu. ft. Fig. 2 is a sectional drawing of boiler and setting.

The dimension from the boiler room floor to the top of the boiler drum is 31 ft. The brick settings are entirely of firebrick, first quality brick being used on the inside of the furnace and second quality brick for the remainder of the setting. No red brick and no cement was used. The bricks were laid face to face with a very small amount of fire clay in the joints.

The boilers are fired with pulverized coal, the equipment being furnished by the Riley Stoker Corp. of Worcester, Mass., and consists of a 4000-lb. pulverizing mill for each boiler, and two Peabody burners set in the front wall and enclosed with a plenum chamber, into which secondary air is forced under whatever pressure may be required by means of a motor-driven fan. The rear wall of the boiler is of hollow construction and there are air ducts underneath the furnace floor so that air is drawn through the boiler setting and delivered to the pulverizing mill. The amount of air so delivered is not in excess of 15% of the total air required, the remainder being furnished by the secondary fan.

Start Fires with Oil

The burners are provided with oil guns, piped to a tank of light oil, so that the fires are started with oil. This makes a very safe, compact, and simple method of starting.

The pulverized coal is delivered from the pulverizers to the burners through two 6-in. standard weight pipes. Each pulverizer is equipped with a magnetic separator and with a hand-regulated feed by which the amount of coal being pulverized can be varied according to boiler load.

At the front of the setting is an instrument panel (Fig. 3) on which are the steam gauges, steam flow meters, draft gauges, and CO_2 indicators, making it possible for the operator to know at all times exactly what is occurring and to regulate the fires in accordance with the steam demand.

Automatic feed water regulators are installed on each boiler, and an automatic pressure regulator, on the feed water pump.

It was anticipated and the indications are that one man will be able to operate these two boilers at a total output of 2000 h.p.

Coal Handling Equipment

A simple coal handling system has been installed consisting of a crusher located in a pit immediately outside of the boiler house wall, a vertical elevator delivering to a short screw conveyor on the roof (see Fig. 1), the coal dropping down through the latter into a 50-ton bunker immediately below.

Coal is dumped from two railroad trestles immediately adjacent to the boiler house, and that part of the coal which falls near the crusher is delivered to the latter by means of a simple portable loader which can be pushed into any part of the pile within reach. The more distant coal is shoveled into an electric dump car which is run over to the coal crusher and dumped into the latter.

A hand-operated traveling larry runs lengthwise of the boiler room, this larry holding about one-half ton of coal. By means of a chain-operated coal valve, coal drops from the storage hopper into the traveling larry, and the latter is then pulled by hand chain to a position over one of the pulverizer hoppers into which the coal is discharged. The coal taken from the pile is crushed to 1-in size and the pulverizer reduces it to a fineness comparable to dry cement.

Finely pulverized coal is easily ignited, and, when mixed with the proper proportion of air, may bring about a dust explosion, the source of which is not easily determined. A fire of apparently small significance may start one of these dust explosions; and it is, therefore, very essential that no finely pulverized coal be allowed to escape into the atmosphere. This is one of the dangers incidental to the use of pulverized coal in what is known as the storage system, where coal is pulverized at some central point, pumped through pipe lines into a storage bin, and then either pumped or allowed to flow by gravity into the burners at the boilers. In this storage system there are many opportunities for this extremely fine dust to accumulate, and, unless it is regularly brushed away and the atmosphere kept clear, dust explosions can and do occur.

Boiler Room Requires Care

It is essential that conveying pipes be absolutely tight and that all openings from which this fine dust may escape be effectively and permanently closed. Whereas in the past boiler rooms have presented a crude appearance, it is essential that the modern boiler room be given the same care as

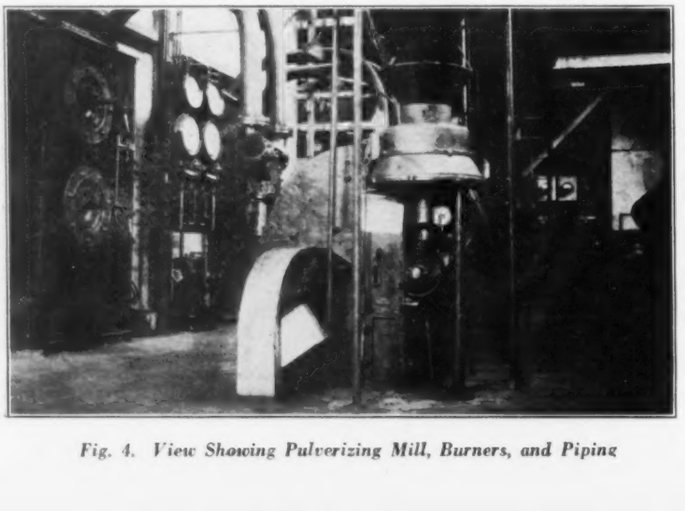


Fig. 4. View Showing Pulverizing Mill, Burners, and Piping

regards cleanliness and maintenance that is bestowed upon engine rooms.

The unit system of firing pulverized coal possesses certain advantages over other mechanical firing appliances in that all machinery and wearing parts are external to the boiler settings, can be easily inspected, and are simple in construction. If conditions are such that boilers cannot be set above normal ground level, if there is no opportunity to provide a basement or tunnel for the removal of ashes, then the pulverized fuel system possesses a very distinct advantage. When there are no physical restrictions on the complete design, then the relative merits of stokers or pulverized fuel equipment must be given the most careful thought.

A statement which has almost become an axiom in the minds of many is that a cotton mill load is an ideal one for a power plant because it is a steady load and all of the equipment can be operated at its highest efficiency. This is a very erroneous belief, inasmuch as a cotton mill load is continuous for not more than 4½ hrs. and at the end of that time drops to zero immediately. Fires have to be built up from minimum to maximum within a few moments, dropped from maximum to minimum in the same time, and for 15 hrs. out of the 24 the load may be anything from zero in the summer time to a light load in the winter time represented by the heating system. The load factor, as the public utility engineer designates it, is low, with maximum variations occurring within a few moments.

Flexibility

This character of load is most easily handled with an oil burning system with which fires can be exterminated in an instant and built up again with equal rapidity. The pulverized fuel system is almost equally flexible, particularly if combined with it is an oil burner for starting fires.

Moisture in coal presents certain difficulties due to clogging in coal hoppers. Lumpy coal carries a small amount of moisture per ton and when crushed and pulverized is handled in a comparatively easy manner. Coal which is in a finely divided state and exposed to the weather carries a high percentage of moisture which is difficult to dispose of. Introduction of high temperature air into pulverizing mills is of great benefit and improves the operation of both mill and burner. Heating of the secondary air is advantageous, but in most industrial plants presents a complication that would not be compensated for by the decreased cost of steam.

Summary

Summing up, the advantages incidental to the installation of such an equipment as herein described are, first, large units occupying minimum ground space with a reduction in the amount of piping, valves, and appurtenances of all sorts to be maintained; second, increase in efficiency of 15%; third, a reduction in the labor per boiler horsepower; fourth, the ability to maintain a higher efficiency through a more exact control of operation; and, fifth, the ability to build up and decrease fires with a rapidity conforming to the sudden changes which occur four times a day.

The first cost of a modern boiler plant is much higher than that of the old hand-fired low-set boilers. The boiler itself will cost about the same per horsepower in either case. The cost of the brick settings will be two to three times greater. The cost of the coal handling and firing equipment will be as great as the boilers without the setting.

When it becomes necessary to replace old boilers, the question of whether the old design should be retained or the more modern design substituted can only be answered by a thorough study of the individual case and an accurate determination made as to whether increased efficiency and lower labor costs with the modern design will warrant the increased expenditure.

The Protective Value of Clothing Fabrics

Results of Laboratory Tests Carried Out at Kansas State Agricultural College on a Variety of Wool, Cotton, and Mixed Fabrics to Determine How Clothing Made From One Fabric Keeps Its Wearer Warmer Than Clothing Made From Another

By E. V. Floyd and Lillian Baker

ACCORDING to the popular conception of the protection which clothing affords the body, woolens are warmer than cottons. Experiments show that the capacities of wool and cotton fibers to conduct heat do not differ a great deal. If woolen fabrics are warmer than cotton fabrics there must exist factors other than the conductivity of the fiber itself which cause woolens to be more protective than cottons. Certain experiments have been completed and others are in progress which offer valuable suggestions as to how clothing keeps its wearer warm.

Maintenance of Body Heat

Since uniform temperature of the human body is one of the essential conditions for life, and, since heat is continually escaping from the body by convection, conduction, and radiation, compensation for this loss must be made either by the use of food or by the use of clothing.

Much research has been centered on the study of foods as a means for supplying heat to the body. Comparatively little attention has been given to clothing as a means for preventing the escape of heat from the body.

The body must have food, not only to supply heat, but also for growth and repair. Clothing which will prevent all heat losses from the body is impossible; therefore, the use of heat-producing food and heat-conserving clothing to assist the heat-regulating mechanism of the body in maintaining a constant temperature seems judicious and offers productive lines of investigation.

This article is based on a master's research performed at the Kansas State Agricultural College by Florence Roberta Clark (1925) and directed by Professors Lillian Baker (Textiles) and E. V. Floyd (Physics). It reports results of an investigation designed to measure the protection which certain clothing fabrics offer against the escape of heat from the body.

For this discussion the protective ratio of a clothing fabric is defined as the ratio of the quantity of energy required to maintain the unclothed body at its normal temperature of 36 deg. C. to that required to maintain the body when clothed in the fabric being studied, at the same temperature.

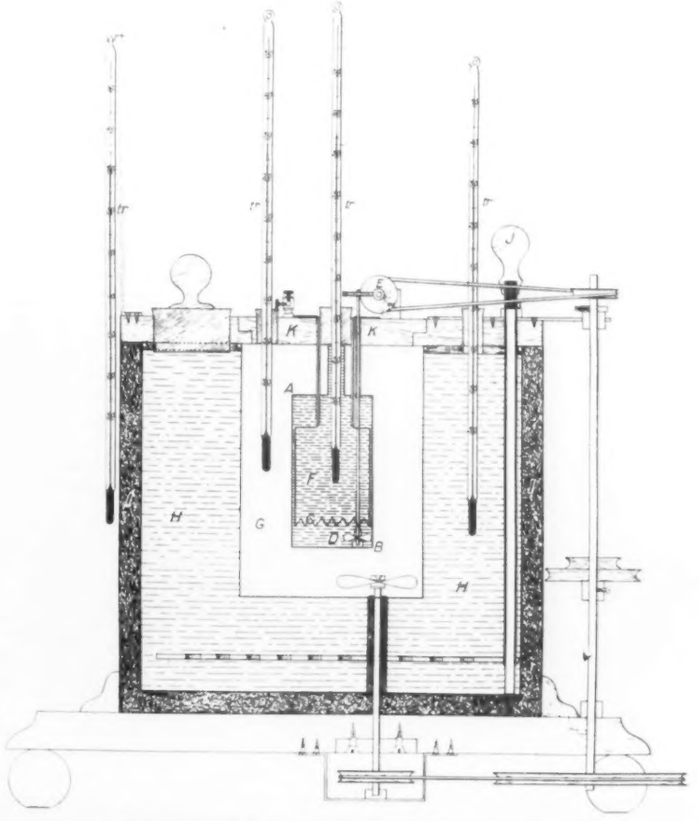


Fig. 1. Calorimeter Used in Determining Fabric Protective Values

Apparatus and Procedure

The special apparatus used is shown as a whole at Fig. 2, and the calorimeter in detail at Fig. 1. The details of the apparatus used as shown at Fig. 1 are:

A-B, an oil filled copper cylinder 2 in. in diameter and 4 in. long.

C, a heating coil terminating in binding posts on the calorimeter top.

D, a 4-blade revolving stirrer operated by a worm gear *E* and the system of pulleys, shafts, and belts shown in the diagram.

F, transformer oil filling the copper cylinder and its neck.

G, air maintained in slow motion by the small electric fan shown in the figure.

H, water filled jacket surrounding the air calorimeter.

I, glass wool insulation.

J, a stirrer for water in jacket.

tr, thermometers for reading room temperature, water temperature, air temperature in the calorimeter, and oil temperature.

K, a wooden top containing rubber gaskets which seal the air calorimeter.

The procedure, in outline, consisted of placing a carefully fitted capsule of the fabric in question on the oil filled, copper cylinder *A* (Fig. 1.), after which an electric current of such value that the temperature of the oil was maintained at 36 deg. C was passed through the heating coil *C*. The fabric capsule was then removed and the current re-

adjusted to a value which would maintain the temperature of the oil at 36 deg. C. The electrical energy required in the latter case divided by that required in the former case was taken as the protective ratio of the fabric used under the condition of the test.

The oil filled cylinder *A* was placed in an air environment *G*, the temperature of which could be controlled by the water in the jacket *H*. Proper stirring of the oil and air was accomplished as shown in the illustration.

Computation of Results

The computation of results for the fabrics listed in Table 1 may be illustrated from the following data taken for the blue flannel capsule.

Blue flannel	1st trial	2nd trial	3rd trial
Relative humidity of air in room.	40±1%	40±1%	40±1%
Temperature of room	25.6°C	25.4°C	26.4°C
Temperature of water in jacket.	23.0°C	23.0°C	23.0°C
Temperature of air in calorimeter	24.8°C	24.9°C	24.9°C
Temperature of oil in cylinder...	36.0°C	36.0°C	36.0°C
Potential difference in volts across the heating elements for the bare cylinder	3.35	3.35	3.35
Potential difference in volts across the heating element for the flannel covered cylinder..	3.11	3.10	3.10
Current intensity in amperes for flannel covered cylinder	.603	.605	.602
Current intensity in amperes for bare cylinder	.65	.65	.65

Computed relative humidity of the air in the calorimeter increased 2% which is negligible, since the relative humidity of the air in the room varied as much as 2%.

Substituting in the energy equation for the electric current ($E_j = \overline{PD}_v I_a T_a$) the energy per second required to maintain the flannel covered oil cylinder at 36° C. gives:

	1st trial	2d trial	3d trial	Mean
$E_j = 3.11 \times 6.03 \times 1 =$	1.875	1.875	1.866	1.872

Likewise the energy in joules required to maintain the bare oil cylinder at 36° C. is: $E_j = 3.55 \times .65 \times 1 = 2.178$.

1st trial	2d trial	3d trial
$\frac{2.178}{1.875} = 1.161$:	$\frac{2.178}{1.875} = 1.161$:	$\frac{2.178}{1.866} = 1.167$

Therefore, the mean protective ratio for this capsule of blue flannel, in still air and at a 40±1% relative humidity in an environment temperature of 25.8° C., is 1.163. The protective value in per cent was determined by dividing the saving in energy due to the fabric, by the energy required to maintain the bare cylinder at 36° C. and is 14%. In like manner the protective ratios and the protective values in per cent for the other fabrics listed in Table 1 were computed from experimental data.

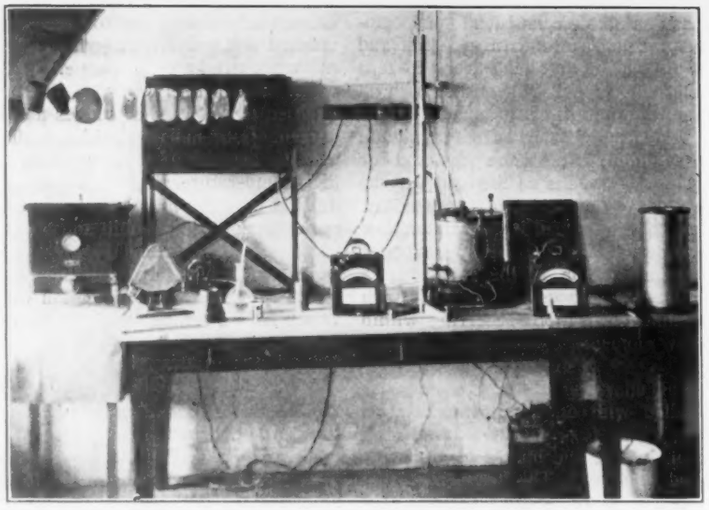


Fig. 2. Equipment Used in Experimental Work

TABLE 1

Name of fabric	Protective ratio	Protective value in per cent
Denim	1.050	4.8
Indian head	1.072	7.0
Canton flannel (nap inside)	1.075	7.7
Cotton underwear	1.084	8.8
Mixed cotton and wool vest	1.097	9.0
Blue broadcloth	1.111	10.0
Baby shirt	1.114	10.6
Red broadcloth	1.120	11.0
Cotton underwear (fleece lined)	1.145	12.8
Outing flannel	1.145	12.8
Navy blue flannel	1.163	14.0
Canton flannel (nap outside)	1.182	15.0
Mixed flannel	1.224	18.0
Astrachan (nap inside)	1.404	28.0
Astrachan (nap outside)	1.426	28.6

The values in Table 1 were obtained under the following conditions:

Relative humidity of air in which fabric was conditioned	40±%
Temperature of air in which fabric was conditioned	26°C±1°
Temperature of air in calorimeter during tests	25°C±1°
Temperature of calorimeter jacket	23°C±1°
Temperature of oil in cylinder during tests	36°C

The computed relative humidity of the air in the calorimeter increased 2% which is negligible since the relative humidity of the air in the room varied as much as 2%.

Protective Ratio and Temperature

A study was made of the relation between the protective ratio of blue flannel and the temperature of the air surrounding it. The flannel capsule was first conditioned to a bone dry state, then placed on the oil cylinder in the calorimeter. The air in the calorimeter had previously been dried by the use of phosphorus pentoxide, and, to insure perfect dryness, the pentoxide was left in the calorimeter during the experiment. The temperature of the air surrounding the fabric was controlled by the use of crushed ice and water placed in the jacket of the calorimeter.

The results of this part of the experiment are listed in Table 2.

TABLE 2

Environment temperature°C	Energy in joules required to maintain the oil cylinder at 36°C.
Data for bare oil cylinder	
5.6	6.281
8.9	5.595
13.6	4.708
17.4	3.831
21.8	2.767
26.6	2.041
30.9	1.039
35.3	0.232
Data for flannel covered cylinder	
5.0	5.242
9.1	4.578
15.0	3.888
18.0	3.047
22.2	2.401
26.4	1.676
30.2	0.949
34.6	0.185

The values given in Table 2 are plotted at Fig. 3 in the form of curves I and II. Curve III is plotted from curves I and II by dividing the coordinates of curve I by those of curve II for the same temperature.

From curve III in Fig. 3 we may read the following temperatures and protective ratios:

TABLE 3

Temperature°C.	Protective ratio
5.0	1.230
10.0	1.228
15.0	1.229
20.0	1.231
25.0	1.229
30.0	1.240
35.0	1.238

Curve III in Fig. 3 and the data in Table 3 show that the bone dry blue flannel used has the same protective value at all temperatures between 0° C. and 35° C.

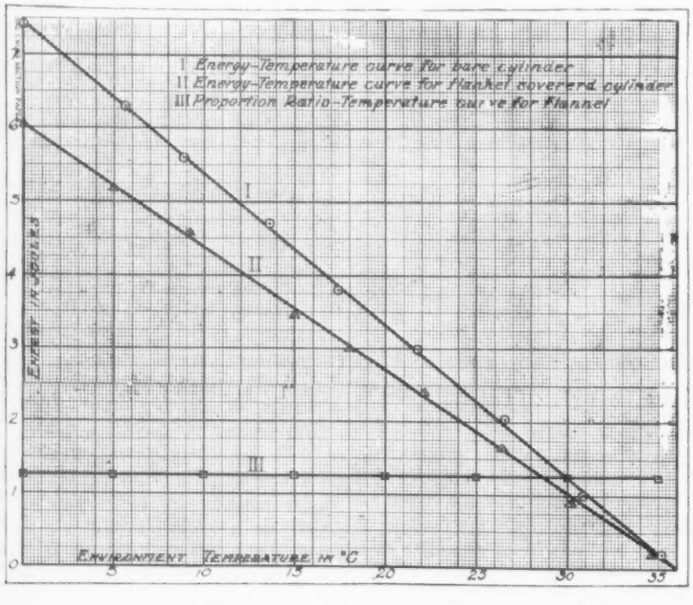


Fig. 3. Energy-Temperature Curves

Protective Ratio and Fabric Mass

Table 4 is a record of the fabrics tested, their protective ratios, and their masses in grams per square meter and in ounces per square yard in the bone dry condition.

TABLE 4

Name of fabric	Protective ratio	Mass in gms. per sq. m.	Mass in oz. per sq. yd.
Denim	1.05	152.5	4.51
Indian head	1.072	172.2	5.08
Canton flannel (nap inside)	1.075	339.0	10.00
Cotton underwear	1.084	377.6	11.14
Mixed cotton and wool vest	1.097	383.4	11.31
Blue broadcloth	1.111	254.6	7.51
Baby shirt	1.114	256.6	7.57
Red broadcloth	1.120	300.5	8.85
Cotton underwear (fleece lined)	1.145	445.4	13.14
Outing flannel	1.145	159.7	4.71
Navy blue flannel	1.163	196.1	5.78
Canton flannel (nap outside)	1.182	339.0	10.00
Flannel, mixed wool and cotton	1.224	210.1	6.2
Astrachan (nap inside)	1.404	532.7	15.7
Astrachan (nap outside)	1.426	532.7	15.7

Complete textile analyses, by standard methods, were made of each fabric used in the investigation, and these are available for reference.

Discussion of Results

Table 1 lists the fabrics studied in order of increasing protective ratio. Denim is least protective and astrachan most protective. Denim is a hard, wiry cloth with practically no nap, while astrachan is thick, fluffy, and enmeshes more air than denim.

Canton flannel with nap inside has a protective ratio of 1.075 and with nap outside a ratio of 1.182. This increase in protective ability of ten per cent with the nap outside is probably due to the fact that the nap is not compressed and consequently enmeshes more air than if it were on the inside where it would be more or less compressed. The experiments were done in still air. In moving air the protective ratio of a fabric with nap on the outside may be less than when on the inside. Experiments are now in progress which have for their purpose the determination of protective ratios in winds of various velocities.

Table 1 also shows that the protective ratio of blue flannel at 25 deg. C. in still air of 40% relative humidity is 1.163, while Table 3 shows that the same sample of blue flannel at 25 deg. C. in still air of zero relative humidity, that is, in dry air, is 1.229. This observation indicates that this sample of blue flannel is less protective when in moist air than in dry air. This seems reasonable due to the high heat conductivity of moisture. An investigation of the relation of protective ratio to relative humidity of the surrounding air is in progress.

Results Not Absolute

An inspection of Table 1 shows that the percentage of the heat loss from the bare oil cylinder prevented by the fabric varies from 4.8% for denim to 28.6% for astrachan, nap outside. One may be impressed by the small amount of protection offered by the rather wide range of fabrics. The following facts, however, should be considered:

The fabric capsules were very carefully fitted to the oil cylinder, since it was found that the protective ratio de-

(*Continued on page* 85)

Hand-to-Mouth Buying a Stabilizing Influence

Hosiery Manufacturer Sees Much Good in It if It Is Handled Properly—Minimizes Cancellations and Eliminates Worry Over Frozen Stocks—Style Developments Have Made Period of Adjustment in Hosiery Field a Particularly Complicated One

By Edward Freschl

President, Holeproof Hosiery Co., Milwaukee, Wis.

The accompanying address was one of several presented at a conference on hand-to-mouth buying held at the Congress Hotel, Chicago, Feb. 17, under the auspices of the Metropolitan Life Insurance Co. Over 200 executives from Chicago and other cities of the Central West attended.

Among the industries whose relation to the new system of purchasing was discussed were textiles, railroads, steel and machine tools. In addition papers were presented dealing with the attitude of the banker toward hand-to-mouth buying, the wholesaler's experience with it and the general economic influence.

THE practice of hand-to-mouth buying or "buying for immediate use" dates back to the year 1920, that, of course, being the year in which the post-war business depression commenced. It is almost unnecessary to explain that the practice of hand-to-mouth buying had its inception at that time as a result of the disastrous effects following over-speculation and over-buying, which had been indulged in by merchants and manufacturers as a result of the war boom.

Prior to 1920 and as far back as business recollection takes us, it was customary for merchants, both wholesale and retail, to buy their merchandise practically at stated periods of the year. It may be of some interest to trace back our own experience in this respect as it represents such an extreme reversal of conditions. Going back about 30 years, we were engaged in the manufacture of woolen gloves and hosiery, and sold our product exclusively to the wholesale trade. It was what is termed a "one season" business. In other words, the article was used only at one time of the year, namely, the winter months, and was bought by the jobber only once a year. Our salesmen went on the road in November and sold our entire year's output in three months. It was the practice then to buy our raw materials to cover these orders, namely, enough for a year's production. The goods would be manufactured and shipped to the jobber throughout the summer months and would be delivered by him to the retailer in the fall and winter months. I am citing this situation in passing, merely to show an extreme example of the change that has taken place in buying methods in a period of thirty years; and I think I am correct in saying that it is quite typical of the general trend.

Having found that merchandising a branded and nationally advertised product through the jobber did not prove to be a satisfactory method of distribution, it was decided to change our method of merchandising and sell direct to the retailer. At the same time other products were introduced by us so that we had an "all the year 'round" business. From that period on until the war boom started, it was customary for our salesmen to call on the retailer about twice a season (spring and fall), or four times a year. In other words, the dealers' orders were at that time practically based on purchases for three months at a time. This method of buying was quite general in the textile industry, at least so far as houses were concerned that sold direct to the retail trade.

When the war boom started, the situation was, of course, wholly changed and revolutionized. Dealers became almost stampeded in their anxiety to get merchandise and they not only placed orders for all they could hope to get from one house, but duplicated their purchases as many times as possible with other sources of supply. This situation continued as before stated until 1920 at which time the custom of hand-to-mouth buying started.

The Style Complication

It is interesting to state here that the problem of meeting the new situation might have been relatively simple, as it no doubt has been in many industries. But it so happened that at this particular time another problem came into existence, in fact, almost simultaneously with hand-to-mouth buying. I refer to the change-of-style phase of the situation. Prior to this time styles in hosiery had been very stable; in fact, I might almost say that there were no styles. Women wore long skirts and stockings were considered strictly as a covering for the legs and not at all from a standpoint of stylish wearing apparel. There were conventional colors and color combinations which were never departed from. It was as fundamental as the laws of the Medes and the Persians that black stockings should accompany black shoes, brown stockings should be worn with brown shoes; and white stockings with white shoes. Of course, only cotton and wool hose were worn at that time, and the wear of silk stockings was something to be looked upon with a frown.

A change took place; skirts were shortened and women became educated to the wear of silk stockings as a matter of daily occurrence. However, the color combination I have described remained in effect. Suddenly, however, some woman conceived a new idea. Somewhere or other, (I have never ascertained just where this took place) a leader in the world of fashion appeared wearing black shoes and champagne colored stockings. The thing spread over the world like wildfire; and it was impossible for the manufacturer to meet the demand for champagne colored stockings. This style or color combination continued for a few months when some other lady conceived the idea of wearing gray shoes and gray stockings. As is usual in these things, the multitudes followed suit and women began besieging the stores in an attempt to match gray stockings and gray shoes. This was only the beginning of a color craze in hosiery, and I am discussing it at some length because the situation as it later developed has a very distinct and important bearing on the subject we are discussing today, namely, hand-to-mouth buying.

When the style for gray stockings came in, it was quite safe for the merchant to put in a stock of a number of shades of gray hosiery. It was quite likely that he would be able to move these goods with little difficulty, especially inasmuch as he did not foresee that over night there would be another radical change. And that also came to pass; for suddenly from gray stockings, the ladies the world over changed to flesh colored, or what is known as nude shades of hosiery.

This was the beginning of chaos. It was discovered by fashion designers and manufacturers of dye stuffs that they could designate as many different shades in flesh colors as there are colors in the rainbow. This, of course, brought about a situation which made it almost impossible for a merchant to place orders for any appreciable period in advance of his actual needs. Therefore he most naturally resorted, not only to hand-to-mouth buying as it is usually thought of, but to hand-to-mouth buying to the n-th degree. Where it was formerly the custom for even the relatively small dealer to place orders for what we call "case lots," today the biggest department stores with the largest hosiery departments hesitate to buy more than a few dozen at a time of various colors in women's hosiery. In addition to this, it is necessary for the manufacturer, in order to meet the competitive situation, to offer to take back from the dealer such shades as he does not find suitable for his trade and replace them with other shades.

This description of the situation is not given in a spirit of criticism of the retail merchant. We as manufacturers can only sympathize with him in appreciation of his position. We feel that the situation is one that calls for the utmost effort to cooperate and make it possible for the merchant to continue his hosiery business on a profitable basis.

Affected All Types

In our particular business it so happened that we were confronted at the same time with this radical change in buying methods, namely from future-buying to hand-to-mouth buying, and a revolutionary style change; but in addition we had to meet a similar situation in connection with the manufacture of men's hosiery and children's hosiery. For many years the style in men's hosiery called for what we call "plain colors." This entailed the manufacture of only some eight or ten colors; in the past few years, however, the style in men's hosiery changed to the use of what we call "fancy designs" or "novelties," which, of course, involved the production of a great many more numbers in order to meet the popular demand.

The same thing is true with regard to children's stockings, which we also manufacture. A few years ago, just as women wore only black, brown, and white stockings, children wore the ordinary long, cotton stocking, principally in black, but a few brown and white. It was not necessary to make more than three or four different numbers of so staple a commodity. However, at about the same time that the styles began to change in women's and men's hosiery, a corresponding style change took place in children's hosiery. The ordinary or garden variety of long stocking was discarded and children began wearing what we call three-quarter and seven-eighth length stockings with fancy tops and fancy designs, which change again brought about the necessity of the manufacture of a very extensive line.

In order to give a general picture of what these changes in styles in men's, women's and children's hosiery entailed so far as manufacturing and carrying of stock is involved, I will

say that we made and carried in 1920 some 480 items in the three classifications, whereas at the present time we manufacture and carry in stock 6006 items. If you will stop to think that this upheaval and change took place at practically identically the same time that merchants went from advance-buying to hand-to-mouth buying, you may in a measure understand the serious problems and difficulties that it has been and still is necessary to meet.

The Burden of Stocks

In following the hand-to-mouth buying policy, merchants naturally buy as abstemiously and as frequently as possible; but on the other hand, in order for them to meet competition, they must have comprehensive stocks of merchandise and therefore require prompt and efficient deliveries and service. This means that full and complete stocks of finished merchandise have to be carried by the manufacturer; and in our particular business we have found it necessary in addition, to carry branch stocks in warehouses in six different localities in various parts of the country. That, of course, multiplies our difficulty by just so many times, as prompt deliveries are required from each one of these branches. To give a picture of the increase in stocks of finished goods that these changes have brought about, I might state in passing that in 1920 our inventory of finished production was 220,000 dozen, while we carry at the present time 480,000 dozen at our home plant and branch warehouses, or an increase of 118%; our increase in volume of sales by units has only increased in the same period 55%.

Extra Detail Involved

Another point that might be interesting to consider is that of office detail and shipping; under this term I include such things as credit control, making out orders, shipping merchandise, billing and collections. To cite an extreme example, I will assume for instance that, under the old custom of buying, a merchant has placed an order for a case of goods consisting of, say, 60 dozen, to be delivered at a certain future date and representing about one-fourth of the purchases he might make throughout the year. This would mean that one credit reference would have to be made, one order would have to be made out, one shipment made intact, and one bill sent.

Under the present system of buying for immediate needs, this transaction, without any exaggeration might have to be multiplied by 11. In other words, for the same quantity of merchandise, as stated above, we might receive 11 orders, look up the credit 11 times, make out 11 orders, make 11 shipments, and send 11 bills. As a matter of fact, due to this state of affairs, it has been necessary for us to increase our personnel in the office and shipping room 70%.

There is one additional vital factor that enters into this discussion, namely, fluctuations in the costs and values of raw materials, and there is also the other serious item of sudden depreciation, due to style changes, in merchandise, both finished and in the course of manufacture. I mention these two factors hurriedly in passing, but leave it to your own imagination and judgment as to what the contingencies are that must be taken into consideration in carrying stocks of these dimensions.

Let us stop to think of the ordinary problems that have to be met as a result of hand-to-mouth buying by the manufacturer of a staple commodity, for instance a toilet soap, or a food, or tooth paste; bear in mind that each of the above named articles is equally adapted to use by men, women, and children, no special articles having to be made for each; that only one size and color are required throughout the year; that no style changes can take place; and that stock inventories are subject to practically no depreciation or change. You will then have a picture of what hand-to-mouth buying signifies when multiplied by the vagaries of style changes.

Reaction to Change

It occurs to the writer that there were three distinct phases to the way that the change from advance-buying to hand-to-mouth buying was received by manufacturers, when it first dawned upon them that this change was taking place. First, there were those who immediately took a reactionary stand and refused to permit themselves to be controlled by the new order of things, and who held out as long as they possibly could in this obstinate frame of mind.

Second, there were those who accepted the change as a necessary evil and permitted themselves to be carried along with the stream, accommodating themselves to the new trend, but doing so to a large extent under protest.

Third, there were those who immediately accepted the new situation with good grace and, without any hesitation, decided to make a virtue out of what seemed to be an evil, and who capitalized the situation to as great an extent as possible. The manufacturers who can be classed in this category have found it possible to take advantage of the situation and to increase their business operations tremendously as a result of it.

Much Good in It

In general, my analysis leads me to the conclusion that there is much good and little harm in hand-to-mouth buying. It unquestionably increases the cost of selling, warehousing, and operating. On the other hand, it is a question whether or not this increased cost is offset by the decrease in inventory investment over the investment which might have obtained if future buying were still in vogue. Personally, I think the expense is offset by the reduction in inventory. But of even greater importance, to my mind, is the stabilizing effect upon our industry. Minimum stocks and minimum commitments exist everywhere. I do not see how any depression could affect us seriously. There would be practically no cancellations and it is inconceivable that any manufacturer would be unable to feel a slowing up in buying in time to protect himself. The merchant and the manufacturer and the vender of raw materials are all freed from the worry of cancellations or frozen stocks.

Personally, I am greatly in favor of the present method of buying if it is handled properly. I believe it has come to stay and that the big problem which confronts us is to work out a fair and profitable cooperation between the merchant and the manufacturer.

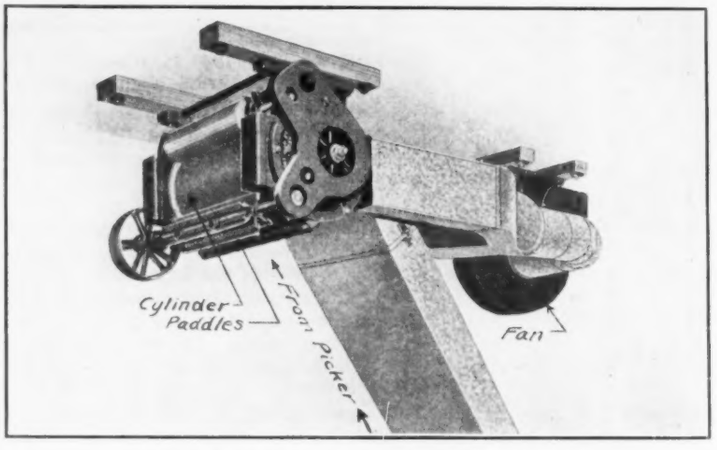
I feel that it is a situation that is still so new and unprecedented that we are all of us to a certain extent floundering about in an effort to get our bearings and get our feet on the ground. However, as they say in England, we are going to muddle through and make the most of what might be considered a bad situation. I think the American manufacturer and merchant have demonstrated in a remarkable way their faculty for adjusting themselves to a novel situation which has been fraught with difficulties and knotty problems, and have come through with flying colors.

Satisfactory Wool Mixing

Ceiling Suction Condensers Solve Problem of Separation of Various Weights of Mixed Stock in Blow Room

By Cal Ender

IN an article entitled "Unsatisfactory Wool Mixing," published in our issue of Dec. 4, attention was called to the difficulty encountered in many blow rooms when the heavier components of mixed stock separate from the lighter. The author of the article expressed the belief that some day this difficulty would be overcome. One of our readers has since informed us that, although the problem seems to him impossible of solution in the blow room, he believes it has been very satisfactorily overcome by the ceiling suction condenser, which has in some mills replaced the blow room. The writer accepted an invitation to visit a neighboring mill and observe the operation of a condenser with this idea in mind.



Ceiling Suction Condenser for Use in Woolen Mill

Originally for Cotton Waste

The Proctor & Schwartz ceiling condenser, which was the machine examined, was originally designed for removing the dust from cotton waste, and over 500 have been installed in various plants for this purpose, as well as a hundred or more for other purposes. Some years ago one was installed in the woolen mill of the Kent Manufacturing Co., Clifton Heights, Pa., to take the place of the blow room. This particular condenser was attached to a fearnaught picker. Since then a number of other woolen mills have installed the condensers and it appears that they are becoming an established part of woolen mill equipment.

The principle and operation of the condenser may be summarized in a few words: A current of air flowing upward through a large pipe carries the wool stock as far as a screen (perforated metal cylinder), which halts the progress of the stock and causes it to drop on the floor or into a bin, truck, hopper, or other suitable receptacle. The light dirt passes through the screen and into a dust collector.

Details of Equipment

The design of the condenser is in accord with the simplicity of its operation. The stock leaving the picker or other preparatory machine enters the lower end of a large galvanized-iron conveyor pipe. This pipe is provided with an adjustable opening to admit a desirable volume of air for carrying the stock, and is so arranged that heavy substances, such as pieces of metal, wood, etc., drop out at the bottom. The current of air carries the stock up to the condenser, where it comes in contact with the perforated sheet-metal drum or cylinder. This cylinder, which revolves constantly, is carried in cast-iron housings, which enclose its upper portion and two ends. The exposed portion

is closed over on the inside by a baffle plate.

The current of air enters the cylinder through the surface, taking with it the light dirt and leaving the stock on the outside pressed against the perforated surface by the air. As the cylinder revolves, the stock is carried away from the mouth of the feed pipe and hence out of the current of air. It is then free to fall to the floor or into a receptacle provided for the purpose. Its removal from the surface of the cylinder is facilitated by a small revolving leather-bladed paddle wheel or beater of the same length as the cylinder.

A suction fan is connected to the condenser by a branch pipe extending to each end of the cast-iron housing. It is this fan that creates the current of air through the condenser. The light dirt passes with the air current out of the cylinder at the ends, through the fan, and finally out of the building through another conveyor pipe to a dust collector.

In the installation which the writer examined, the stock falls in the manner of a shower into the hopper of a second picker. From this picker it is blown directly to the card room bins. This installation is said to be unique, and it indicates the wide adaptability of the equipment.

Separation Impossible

It will be evident to the reader that the manner of depositing the stock on the floor or in bins, trucks, hoppers, etc., is not likely to cause separation of the various weights of fiber, since no use is here made of air currents. The only force employed at this point is gravity, which, as physicists inform us, tends to draw all bodies, heavy or light, with equal acceleration. The resistance of the atmosphere may tend to slow up the lighter fibers somewhat, but the effect is negligible. The heavier fibers falling above the lighter tend to drag the lighter with them. Furthermore, the entire stock falls on approximately the same spot, and it therefore seems doubtful that the fibers could lose their relative positions under any circumstances.

Although the ability of the machine to prevent separation of the stock was the feature in which the writer was at this time most interested, he does not wish to give the impression that this is the principal function of the ceiling condenser. Its most important work is probably the removal of the dust, specks, and other light impurities in the stock.

Elimination of the blow room has the further advantages of reducing the fire hazard, saving floor space, reducing labor costs, and making possible the depositing of the stock in any convenient location. Where stock is to be run through the same picker twice, the condenser may be placed directly behind this machine—in that way returning the stock to a convenient location for beginning the second run. Removal of the light dirt before carding makes stripping of the cards less often necessary. The condenser is capable of handling from 1,500 to 2,500 lbs. per hour.

Slashing from Warper Creel

One Process Eliminated by New Method Being Perfected at Cliffside (N. C.) Mills

AN interesting development in making warps for the loom is being worked out at the Cliffside Mills, Cliffside, N. C., by the mill management in cooperation with the Cocker Machine & Foundry Co., Gastonia, N. C., and the Foster Machine Co., Westfield, Mass. Warps are being slashed direct from a magazine cone creel without putting the yarn on section beams. This is an excellent example of what can be accomplished by a progressive mill management working in conjunction with machinery builders who have facilities for research which they are willing to give to the industry.

There is a great difference in the cost of handling filling and warp yarns respectively in their journey to the loom for combining into cloth. Where the filling yarn is practically ready for the loom as it comes from the spinning frame, or at most is only steamed and possibly rewound, the warp yarn is spooled, warped on section beams, sized, dried, and wound on the loom beam. After that the ends must be drawn in, tied in, or twisted in, and drawn through the reed. Such a long series of operations as compared with filling handling would seem to offer opportunities for cutting down the amount of processing required by the warp for some classes of work. This is just the object that is aimed at by the new development.

Taking up specifically the operation of a slasher by the usual methods, it is customary first to warp the yarn on section beams, then to take the section beams to the slasher creels, adjust and equalize the tensions on the various section beams, draw the yarn from the slasher cylinders up to the reeds, and lay the yarn in the reeds for passing to the loom beam. The operations that must be performed before the slasher can be started take from 1 to 2 hrs. on every set of section beams handled.

Every set of section beams handled through a slasher by the usual method yields considerable waste, the amount being governed to a great extent by the counts, the number of ends in the warp, and the accuracy of the measuring devices on various warping equipments. On every set sized, special attention must be paid to the slasher creels to see that one section beam does not have too much or too little tension. If one beam has too little tension, it will empty first and all other yarn in the set will be waste. As the average production per day of 10 hrs. on a slasher requires two sets of section beams, the slasher is only operating about two-thirds of the time, the balance of the work day being used in laying in new sets.

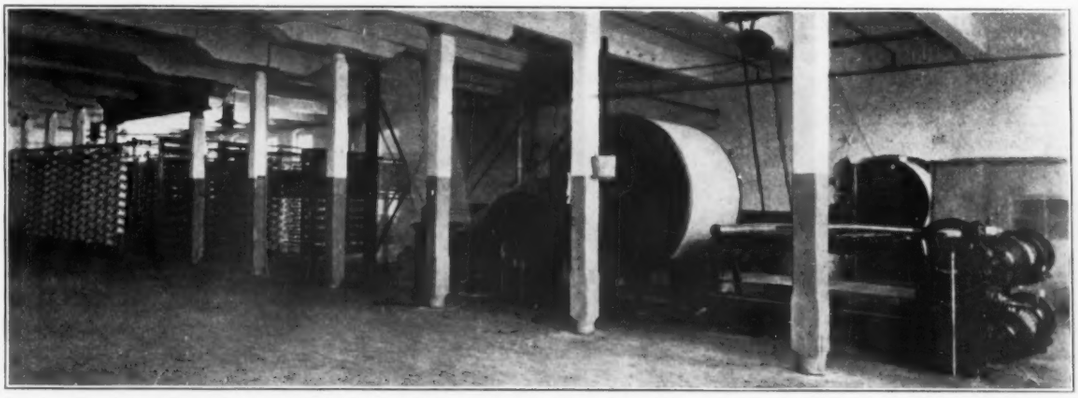
Tie Up Ends Without Stopping

The running of yarn from a creel is in itself a comparatively simple matter, provided none of the ends break. Then the machine must ordinarily be stopped to piece them up. If the machine that the yarn is being run on is a slasher, which sizes and dries the yarn, the operation must be made continuous, for stopping the machine bakes the size on the yarn. Therefore, some arrangement must be made for tying up broken ends without stopping the slasher.

The arrangement that has been worked out by the Cocker Machine & Foundry Co. to make this possible consists of a machine equipped with delivery rollers which draw the yarn from a Foster magazine cone creel, and delivers this yarn to what is termed as an "accumulator." From this accumulator the yarn is led into the size box and over the cylinder, the same as in regular slasher procedure.

The drive to the equipment is through a variable-speed device. A fixed speed from one shaft drives the slasher, and the variable-speed shaft drives the machine equipped with the delivery rollers. The arrangement is such that the speed of the slasher cylinders and the speed of the delivery rollers can be easily and quickly synchronized through this variable-speed drive.

The accumulator, which is located between the machine carrying the delivery rollers and the size box of the slasher, is arranged so that it has a "storage" of yarn that will permit the slasher to take yarn from it for 3 min. with the slasher running on the slow motion drive with which all



Running Yarn Direct from Warper Creel to Slasher; Accumulator at Left Center of Illustration

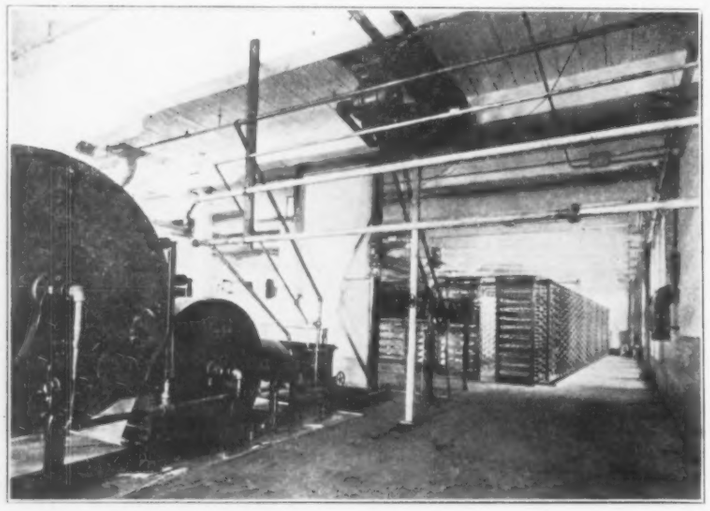
View Down the Alley Between Magazine Cone Creels

slashers are equipped. This period of 3 min. gives ample time in which to make any repairs in tying broken ends, etc., in the creels.

The equipment used at the Cliffside Mills consists of a Foster 2-cone creel for over-end warping, the accumulator, and an ordinary slasher that has been in use for some years at the mills. At the present time the capacity of the magazine cone creel is 1408 ends. This is not considered the limit for this system of slashing warps, however.

Over-End Delivery From Cones

The yarn for the creel is wound on cones by Foster high-speed winders, and is delivered from the cones over-end through a tension device which gives accurate control of tension on each end of the warp. From the drawing-off rolls which pull the ends from the cones, the yarn passes to the accumulator, where it is traversed upward and downward, over and under a series of compensating rolls in sliding bearings before passing to the slasher. The object of this traversing of the yarn upward and downward several times is to provide the reserve supply of yarn between the creel and the slasher, which can be fed to the slasher while the rolls drawing the yarn from the creel are stopped when an end breaks. For the stopping of these rolls, the cone creel is equipped with an electric stop motion which acts when an end breaks down anywhere from the cones on the creel to the accumulator. Also when an end breaks the variable speed device throws the slasher on slow speed.



Another View Showing Accumulator and Entire Length of Creel

If the slasher draws the reserve supply in the accumulator down to the last two yards, another stop motion acts and the slasher is stopped. In practice this rarely occurs. It will be understood from the above that the slasher can be run practically continuously, so that there is no baking of the yarn on the drying cylinders.

When the supply of yarn in the accumulator has been reduced, due to yarn breakage, the variable speed device also controls the speed of the drawing-off rolls from the warper so that the accumulator is again filled up with yarn.

At present, the speed of the slasher is about normal for the class of work being run at the Cliffside Mills. The success of the experiments made so far encourages the mill officials and machinery builders to hope that the equipment can be arranged to run eventually at 200 yds. a minute. The final speed, of course, will be limited by the drying capacity of the slasher, as the yarn can be run from the cone creel at speeds up to 450 yds. per minute.

Suggests Standards for "Part-wool" Blankets

While there is a demand for real part-wool blankets this season it comes as natural consequence of the demand for an honest all-wool blanket, according to H. C. Whitman, of the Esmond Mills. Novelty blankets in proper colors, whether made of cotton or wool, are also moving rapidly.

"There is too much confusion in the consumer's mind as to what constitutes the article advertised and sold as a 'part-wool' blanket," Mr. Whitman pointed out. "Unfortunately, this means that it generally contains about 5% of wool and sometimes as little as 3%. The addition of a small percentage of wool does not make an otherwise cotton blanket any warmer or better, but allows the use of the words 'part-wool' which are misleading to the consumers who would undoubtedly attribute to the article properties which, in reality, it does not possess. The only remedy for the situation to insure protection for the consumer, is to indicate on the ticket or package the actual wool content of the blanket sold as part wool.

"No blanket with less than 20% wool," according to Mr. Whitman, "is entitled to the legitimate use of the words 'part wool.' Blankets containing 20% wool have a definite quality distinguishing them from both cotton and wool blankets and may be properly sold as a different article."

English Cottons Revive

Gains in Spinning and Weaving Trades in Lancashire

MANCHESTER, ENG. — Lancashire cotton spinners and manufacturers have a reputation for looking on the dark side of things, and they are seldom ready to admit when any improvement in the trade position comes round. It is generally agreed, however, that the business done on the Manchester Royal Exchange in yarn and cloth during the four weeks preceding Feb. 16 was on a much bigger scale than in any similar period for several years back. Buyers have been stimulated to give out orders owing to the cheapness of manufactured goods, and the probability of higher values in the near future.

A marked change has recently been met by spinners of American yarns. At the end of last year the production was only about 65% of capacity, while to-day the output is fully 80%. Whereas a couple of months ago many spinners were hampered by stocks; it is estimated that orders now on the books average from six to eight weeks ahead. In the circumstances the operatives are earning bigger wages, and unemployment, especially in Oldham is decreasing.

After the end of the coal strike a better demand was at once met in yarns made from Egyptian cotton, and production in Bolton and district was increased, with the result that at the end of last year the output was about 95% of full. Spinners in this section continue busy and the mills are running full time, but the general position of employers has not improved much.

The feature of the manufacturing branch has been the active buying for India and a leading merchant described the turnover has tremendous. It is a long time since dealers in Calcutta and Bombay placed orders so freely in Lancashire. Numerous firms have sold their full production to the end of April, and some contracts are now being arranged which will not be completed until August-September. This revival of buying for India has stimulated shippers to other markets, and much more trade has been done for Java, Singapore, the Near East, West Coast of Africa and South America. It is unfortunate that China should be disabled for the time being, but there are hopes of more peaceful conditions in the Far East at an early date, and trade will then broaden, as stocks of cotton goods in China, especially in the up-country districts, are very low.

Naturally the extensive buying in cloth has resulted in idle looms being restarted. This has been noticeable in Blackburn and district. Whereas at the end of last year only 60% of the looms were running it is estimated that production now is equal to 75%. There are still some complaints from Burnley, but output is gradually expanding. A better industrial situation also prevails in Preston. The output of weaving mills is fully 15% larger than at the end of last year and in all districts there is a tendency for more machinery to be worked.

There are no indications of demand on the Royal Exchange slackening, and during the last few days leading merchants have paid advancing rates and given longer delivery terms for fresh contracts in a rather surprising manner. The fact of the matter is that Lancashire's customers know there is little likelihood of more favorable opportunities of purchasing, but there is a distinct possibility of more money having to be paid for goods if orders are not placed at once.

Bancroft Heads Eddystone Mfg. Co.

CHESTER, PA.—John Bancroft, Jr., New York, secretary and sales manager of the Eddystone (Pa.) Mfg. Co., was elected president of the board of directors of this concern at a meeting held Feb. 25. He takes the place of John Macadam, former president of the Eddystone Mfg. Co., who recently died. William T. Quillen, of Ridley Park, who is also general manager of Eddystone Mfg. Co., was elected director of Jos. Bancroft & Sons Co., Wilmington, Del. Other officers are Joseph Bancroft, vice-president; Robert C. Cooke, secretary and treasurer. Kenneth Moller, Wilmington, was elected director.

Improvements costing more than $250,000 are nearing completion at the Eddystone Mfg. Co. plant, the buildings having been modernized and new equipment installed in many departments. Six hundred persons are employed at this plant, which is one of the largest producing fast color work, draperies, dress fabrics, organdies, voiles and all varieties of cotton dress goods and rayon products. Buildings of the company cover 200 acres and 70 additional acres are owned extending along the Delaware River.

Harmony Mills Opens Direct Selling Office

The Harmony Mills, Cohoes, N. Y., is now selling its product to the trade, through a New York selling office at 93 Worth street, in room 414. John J. Calhoun and Marvin R. Cross are associated with the selling of the product of the Harmony Mills, as previously. Mr. Calhoun had been with Minot, Hooper & Co. for many years, having been connected with the Harmony Mills account since 1910, when it first came with Minot, Hooper & Co.

B. H. Bristow Draper is president of the Harmony Mills, and John A. Perkins is agent. The mill is listed as having 4,000 broad looms and 1,000 narrow looms; and 208,960 ring spindles. For many years, this plant has been reputed in the market for the fine quality of its merchandise.

John Skinner, treasurer of the mill, states the policy of working with the trade, and through brokers, will be continued, and that the change is made for "even more intimate contact with the mill."

Editors
Charles H. Clark Vernon H. Carroll
Clarence Hutton Douglas G. Woolf

EDITORIAL

We Believe
In the Conservation and Protection
of Domestic Industries

Cotton Bagging For Cotton

THE substitution of cotton fabric for the bagging of raw cotton bales necessarily involves gin compression and the sale of cotton on a net weight basis, and the two latter objectives are of such vast import to cotton manufacturers that the latter should welcome and vigorously support the movement that has for its principal object the substitution of cotton for jute bagging.

If every bale of cotton raised in this country was bagged with cotton instead of jute it would give employment to comparatively few spindles and looms, for a satisfactory cotton bagging would be constructed of very coarse yarns and of very coarse warp and filling. It would, however, use up an enormous quantity of low grade cotton, and, while this is likely to make strong appeal to cotton growers, it might not prove so advantageous to spinners when the crop is small or of average high grade. There is not the slightest question but that a satisfactory cotton covering can be made available that will be reasonably fire and mold proof, and that at present prices of low grade cotton will compete with jute provided the bales are subjected to high density compression, and preferably at the gin.

It will be well for proponents of the movement to study carefully the strenuous efforts that were made during the world war to economize shipping space by rail and water by methods almost identical to those now proposed. Despite the pressure of war needs and Government backing little progress was made toward the desired objective at that time, and without such incentive and aid the overcoming of trade prejudice, custom and rules will be more difficult. This may seem like "damning with faint praise," but no substantial progress can be made without a careful survey of past and present conditions and expert and diplomatic planning to overcome basic difficulties. If high density gin compression and net weight selling can be realized through a movement primarily designed to substitute cotton bagging for jute they will be worth large expenditure of time, effort and money to the world cotton spinning industry.

* * *

Yarn Selling Tendencies

PROBABLY this generation will not see the absolute passage of the commission house form of selling cotton yarns, for as long as there are small mills which cannot finance themselves they will have to depend upon organizations who will not only assure them of the prompt receipt of their money on contracts but who will also advance funds for the purchase of raw materials and supplies.

But the yarn trade sees in the development of the last year or two an ever-increasing tendency to buy direct and the correlative tendency to seek direct representation of yarn mills. Direct sellers are in better shape to take care of the increasing details which are demanded by customers. Not only are breaking strength and other tests demanded by buyers who formerly paid no attention to these matters, but the majority of those who are purchasing direct are doing so on the basis of specifications which the old time yarn house will not consider and which they claim involve too much risk and uncertainty with mills over which they have no personal control.

THE TEXTILE TREND

Cotton Markets: Cotton goods price advance appears to have limitations though sellers are bouyant. Strong effort continues to find new uses for goods. Tickings, denims and chambrays well sold. Printed goods in good demand. Gray goods firm with fair sales volume. Yarns working hard toward better margin of profit.

Wool Markets: A maze of style difficulties still confronts sellers of wool goods. Clothiers are bewildered instead of attracted by brilliant offering. Better results hoped for when buyers digest openings. Men's wear gains characteristics of women's wear field but lacks acknowledged style authority. Worsted yarns still quiet but indicate promise of future spot business in volume.

Knit Goods Markets: Hosiery sellers optimistic but recognize that they will have to fight for business. Fall orders slow in coming in. Underwear sellers believe price reductions were unwise but look for better business later in the year. Sweaters have been quiet. Opportunity for women's pullovers broadening.

Silk Markets: Broad silk market is mixed. Many mills claim large sales; others complain they have to give goods away to move them. Best opinion is that business is larger than generally credited and that buyers are doing most of the price talk. Flat crepes, georgettes, and satins move well. Prints continue good. Raw silk moves slightly higher.

The purchase of yarn today in many divisions of the trade is coming to be a complicated proposition in which technical skill and careful supervision play an increasingly prominent role. Those who refuse to comply with these requirements of the buyer recognize they are playing a losing game in competition with the organizations which are constituted to give the service that is demanded.

Another reason for prophesying a marked change in the sale of cotton yarn is the apparent disinclination on the part of dealers to merchandise yarn as in the past. Of course, there may come a time when the outlook would seem to favor the purchase of yarn by dealers for their own account, holding it for a profit, but the experiences of last year have not been such as to cause much enthusiasm for their repetition. Certain important houses which have had a reputation for this form of merchandising have apparently discontinued their activities in this direction. Though they may resume operations in the purchase and sale of yarn, there seems little likelihood of the speculation which resulted so disastrously for many sellers in the past.

This change of attitude may mean a decrease in the market uncertainties that have been so prominent in the past, but the withdrawal of the speculator must lead to other changes and the direct selling tendency is fostered by the elimination of the merchandising practice. Future yarn selling developments are more or less shrouded in uncertainty but will be watched with intense interest by all concerned.

* * *

Beware of Rayon Extremists!

THE proclivity of the average human being to fluctuate from one extreme to another is particularly well exemplified in the market reaction to the recent improvement in rayon.

A few months ago, this fiber was being ridiculed as a "back number." Elaborate arguments were developed to prove that the rayon "bubble" had been pricked. Today talk of a "boom" and of impending shortage is widespread.

It is true that market conditions have changed materially during that time. The situation today is a firm one, with confidence increasing and demand expanding. However, the change has not been sufficient to warrant the wildly bullish views expressed in certain quarters.

An example of the reaction produced by such talk is a circular distributed by a New York stock brokerage house, reprinting some of the recent optimistic news items on rayon and calling their clients' attention to the shares of two companies. (It is significant to note that one of these concerns is not a rayon producer at all but a manufacturer of knitted products in which rayon is used.)

The circular gives it as the consensus of opinion "that the (rayon) production for 1927 will not be nearly sufficient to meet the demand." Such a statement should not be made without qualifications. *If* general textile business continues to improve throughout the year, and *if* demand for rayon is maintained at the present rate, there is a possibility that shortage might develop, particularly on certain popular numbers. On the other hand, there is added equipment coming into production which, during the year, can be thrown to these numbers to relieve temporary shortage.

TEXTILE WORLD has been, and is, bullish on rayon. It sees a continually broadening market ahead. It realizes that producers' stocks have been liquidated recently and that plants are operating at capacity. It should not be at all surprised to witness further price advances in the next month or two.

Nevertheless it is the editors' conviction

that inflation must be guarded against. The industry is in too much of a state of flux to warrant definite predictions for the future—other than one of expansion. Booming of rayon shares on Wall Street; floating of new companies without proper financial and technical background; use of rayon by textile mills who do not know how to process it—these are danger points which must be avoided. It is true that they give the market an air of prosperity, but they do not insure the best development over the broad future.

If the market is allowed to take its course, there is every evidence that 1927 will witness a healthy balance between production and consumption. But if juggling is indulged in—either of a financial or a technical nature—real progress will be delayed.

Seaconnet Mills Offered For Sale at Auction

FALL RIVER, MASS.—The plant of the Seaconnet Mills was offered at auction on Mar. 2 with over 200 bidders present from all textile centers of the country. John T. Fyans, member of the machinery firm of Fyans, Fraser & Blackway, of this city, made the highest offer for the land, buildings and machinery as a whole, his bid being $150,000.

The plant has 72,464 spindles and approximately 1,500 looms. Samuel Lamport, of New York, and Mr. Fyans were the only two bidders for the property as a whole. Bids were then asked on 2,735 lots of machinery and equipment, disposal of which will require three days. In the event of the total sales failing to reach Mr. Fyans' bid for the property as a whole, he will be awarded the property. Mr. Fyans said his intentions are to operate the plant.

American Woolen to Identify Fabrics and Advertise to Consumer

The American Woolen Co. is undertaking a national advertising campaign backed by identified fabrics. It will start with marking a few of its staples with its trade-mark on the reverse side of every yard. The company's first full-page announcement to the consumer appears in the *Saturday Evening Post* of March 19.

Among the fabrics to be identified are American Woolen serge, unfinished worsted, cheviot and bankers' gray.

Navy Wants Bids on Woolen Cloth

The Navy Department is calling for bids on blue uniform cloth under schedule 6901 opening March 23 for the following quantities and weights: 140,000 yds. 14 oz. 54″ woolen cloth (for uniform jumpers); and 110,000 yds. 18 oz. 54″ woolen cloth (for uniform trousers).

Bidding blanks and specifications may be obtained by interested manufacturers upon application to the Bureau of Supplies and Accounts, Navy Department, Washington, D. C.

Pawtuxet Valley Overseers Hold Banquet

RIVERPOINT, R. I.—Sixty overseers and department heads attended the 19th annual banquet of the Pawtuxet Valley Textile Association in the Imperial Hotel, Feb. 26. President Bartholomew P. O'Connell presided and led a round-table discussion of textile problems.

Start Cooperation with Jobbers

Wholesalers Meet for Conference with Cotton Mill Agents in New York

MEMBERS of the Association of Cotton Textile Merchants of New York and a delegation of members of the National Wholesale Dry Goods Association met at 70 Worth St., New York City, on Wednesday to discuss ways and means of promoting the distribution of cotton textiles and increasing the volume of sales.

Spencer Turner, president of the Association of Cotton Textile Merchants of New York, presided. The meeting was the largest ever held by the association. About 100 selling agents of New York, Boston and other markets, and about 20 wholesalers from various parts of the country were present.

Speaking on behalf of the wholesalers, S. M. Bond, of the Root & McBride Co., Cleveland, chairman of the Committee on Distribution of the National Wholesale Dry Goods Association, said that this was the first time in the history of the industry that cotton manufacturers, selling agents and wholesalers had sat down together to discuss in a spirit of mutual interest the promotion of cotton goods sales and a wider distribution of the products of the mills.

He pointed out that the welfare of all engaged in the industry depends upon the widest possible market being found for the product. The wholesalers, he said, are really field agents of the manufacturers and merchants and the industry's progress as a whole toward increasing the consumption of cotton goods requires a thorough understanding on the part of all factors of the problems involved.

Other members of the wholesalers' committee including Willis P. Munger, of the Burnham-Munger-Root Dry Goods Co., Kansas City; James Rae, of the Arbuthnot-Stephenson Co., Pittsburgh; and Ernest W. Stix, of the Rice-Stix Dry Goods Co., St. Louis, also explained what, in their opinions, would help to increase the consumption of piece goods.

Bertram H. Borden, of M. C. D. Borden & Sons, Inc., chairman of the Distribution Committee of the Association of Cotton Textile Merchants, concurred in the thoughts expressed by previous speakers that the existing agencies of distribution had not always functioned with the greatest efficiency in promoting sales of piece goods and interpreted yesterday's unusually large meeting as an indication of an awakening to their individual responsibilities.

Although no formal action of any kind was taken, the meeting was regarded as a most effective opportunity for the executive heads of the leading firms engaged in both branches of the business to exchange ideas as to what can be done to help the entire industry.

Tariff Commission Nominees Confirmed

WASHINGTON, D. C.—The possibility that the Tariff Commission would be left to operate until the next Congress convenes in December with an anti-protectionist group in control was removed March 1 when the Senate confirmed the nominations of Edgar B. Brossard, of Utah, and Sherman J. Lowell, of New York, Republicans, and Lincoln Dixon, of Indiana, Democrat. It was feared that the obstructive tactics employed by Senator Robinson, of Arkansas, chairman of the select committee of the Senate investigating the Tariff Commission, would block the nominations of Commissioners Brossard and Lowell who have been serving on the Commission since last July without pay, the Senate having failed to act on their nominations prior to adjournment last summer.

The Senate also confirmed on March 1 the nomination of Abram F. Myers, of Iowa, as a member of the Federal Trade Commission.

Fate of Cotton Legislation in Doubt to Last Moment

WASHINGTON, D. C.—The fate of pending legislation on cotton statistics was uncertain on March 2 and it was impossible to predict what action would be taken by Congress prior to adjournment March 4.

Bills had been passed by both houses during the session which were contradictory in character. On Feb. 28 the House passed Senator Mayfield's bill, S. 4746, providing for an annual census of the carryover according to grade and staple on hand August 1 each year, and similar estimates for the current crop, with an amendment amending the existing semi-monthly crop report law reducing to five the number of cotton crop and condition reports, such reports to show the condition and progress of the crop as of Aug. 1, Sept. 1, Oct. 1, Nov. 1 and Dec. 1, together with estimates of the probable number of bales which will be ginned. The House amendment also provides for issuance of a report on or before July 10 showing by States and in toto the acreage of cotton in cultivation to be followed on Sept. 1 and Dec. 1 with estimates of abandonment.

The House amendment to the Mayfield bill is similar to the Jones bill, H. R. 15539, which passed the House Jan. 17, but the Jones bill provides for only four crop reports, eliminating the provision in the House amendment to the Mayfield bill providing for a report on Aug. 1. As reported to the Senate Feb. 18 by Senator Smith from the Committee on Agriculture, the Jones bill would provide for four condition reports with no estimates of probable production and would also eliminate estimates of the grade and staple of the current crop, provided for in the Mayfield bill.

H. G. Stine Heads Globe and Adams Silk Combine

Globe Silk Works, Inc., New Haven, Conn., and D. E. Adams Co., Inc., of Athol, Mass., have merged with $100,000 capital, to be known as the Adams Silk Co., Inc. H. G. Stine, formerly of the Belding-Heminway Co., is president. Operations will be concentrated at Athol.

TEXTILE CALENDAR

Committee D-13, American Society for Testing Materials, Spring Meeting, Massachusetts Institute of Technology, Cambridge, Mass., March 11-12, 1927.

Textile Operating Executives of Georgia, Spring Meeting, Henry Grady Hotel, Atlanta, Ga., March 15, 1927.

National Association of Waste Material Dealers, Fourteenth Annual Meeting and Banquet, Hotel Astor, New York City, March 16, 1927.

Spinners' Division, Southern Textile Association Meeting, Union, S. C., March 23, 1927.

North Carolina State College Textile School, Raleigh, N. C., Textile Week, March 24-26, 1927.

Knitting Arts Exhibition, Commercial Museum, Philadelphia, April 4-8, 1927.

National Association of Hosiery & Underwear Manufacturers, Annual Convention, Philadelphia Commercial Museum, April 6, 1927.

Blackstone Valley Mills Association, Third Textile Exhibition, Village Hall, Northbridge, Mass., April 7-9.

Weavers' Division, Southern Textile Association, Meeting, Spartanburg, S. C., April 20, 1927.

National Association of Cotton Manufacturers and American Cotton Manufacturers' Association Joint Convention, Hotel Traymore, Atlantic City, N. J., May 12-14, 1927.

Master Mechanics' Division, Southern Textile Association, Meeting, Greenville, S. C., May 18, 1927.

National Exposition of Hosiery and Underwear, Waldorf-Astoria, New York, July 18-23, 1927.

Expect Results from Study of New Cotton Uses

WASHINGTON, D. C.—Confidence is expressed by Secretary of Commerce Hoover that the investigation undertaken by the Departments of Agriculture and Commerce, in cooperation with The Cotton-Textile Institute, will be productive of beneficial results in finding new and extended uses for cotton. Since announcement of the undertaking a week ago, much information has been received by the Department of Commerce, bearing on various phases of the projected studies, from persons and firms who expressed their desire to cooperate in achieving the desired end.

The Institute will engage immediately in that part of the program to which it has been assigned, while the Government departments must wait until July 1 before actively undertaking the tasks assigned to them. On that date the $50,000 appropriation authorized by Congress will become available.

E. T. Pickard, chief of the Textile Division, Bureau of Foreign and Domestic Commerce, expressed the conviction that concrete results from the investigation will depend on the extent of cooperation received.

Industrial Council in Passaic Is Disbanded

The Industrial Council of Passaic Wool Manufacturers, organized 11 years ago by the Forstmann & Huffmann Co., Botany Worsted Mills, Garfield Worsted Mills, Gera Mills, New Jersey Worsted Spinning Co., and Passaic Worsted Spinning Co., has disbanded and its employment bureau has been closed.

The move is believed to be the outcome of withdrawal of the Stoehr interests in 1925, and the strike settlements of recent date.

The council was organized to reduce the labor turnover, and also to act in concert on mutual problems. J. Frank Andres was secretary-treasurer and active manager of the council.

The Passaic Worsted Spinning Co. withdrew from the council some time ago and Botany Worsted Mills and Garfield Worsted Mills followed suit. The Gera and New Jersey mills, controlled by the Christian Bahnsen interests, and the Forstmann & Huffmann Co. constituted the council up to the time of disbanding.

Western Outerwear Men to Meet in March

MILWAUKEE, WIS.—Plans are underway for a get-together meeting of the Western District Knitted Outerwear Association, to be held sometime in March, according to H. L. Ashworth, business manager. Mr. Ashworth states that the board of directors of the association will meet to elect two new members to the board to fill the vacancies left by E. H. Mahler and B. A. Miller. At this time the board will probably decide on a date for the summer annual meeting of the association.

Snapped and Sledded Cotton

F. Gordon Cobb, at Meeting of Arkwrights, Points Out Danger in Its Use

ON Wednesday afternoon, Feb. 23, following the adjournment of the Carders' Sectional Meeting of the Southern Textile Association at Charlotte, N. C., a short informal meeting of The Arkwrights was held at which were several guests and others who are interested in the organization and the work it is doing.

F. Gordon Cobb, president of The Arkwrights, opened the meeting and made an interesting and instructive talk, part of which follows:

"We received a letter recently from the superintendent of one of the largest bleacheries in the South stating that they were having all kinds of trouble with some of the goods they were receiving, getting it to bleach and dye without leaving streaks and spots in the goods.

"We have also received numerous inquiries from other sources regarding the same trouble. The most common complaint, however, has been that the goods will not take the dye evenly.

"At any rate, something has happened that is giving bleachers and dyers trouble.

"No doubt most of you are familiar with what is termed snapped and sledded cotton. The Government has made exhaustive tests to prove to the farmer that it does not pay him to gather his cotton by those methods, yet reports show that there have been between three and four millions of bales of sledded cotton gathered in the West from the past cotton crop.

"Formerly we only had the tail end of the crop to contend with as snapped cotton. Now whole crops are being sledded because it can be gathered for about $2.50 per bale, making a saving to the farmer of $3 to $10 per bale and incidentally a loss to the mill of at least double that amount.

"We have proven conclusively that a mill running sledded cotton continuously has more than one-third of its ends down on spinning caused by the bark which comes off the cotton stalk going through all the preparatory machinery and finally knocking the ends down on the spinning.

"In other words, an operative can attend only two-thirds as many spindles where a mill is running sledded cotton as she can if the mill is running on the same grade of cotton which has been gathered in the regular way.

"An examination of a cotton stalk will show that even in pulling off the bowls you get long fibers of the bark mixed with the staple of the cotton. This bark or long slivers is very strong and slick and the gins will not remove it, the vertical and horizontal openers will not remove it, three processes of picking will not remove it and neither will the process of carding remove it, therefore, something must be done with cotton mill machinery to meet this new method of gathering cotton.

"In studying the Government tests of snapped and sledded cotton, we believe we have found something that is affecting bleaching and dyeing.

"It is a known fact that cotton fibers which are hollow do take dyes more uniformly than fibers which are flat, and micro-photographs show conclusively that snapped cotton is, in most cases, immature and therefore does not have the hollow fiber.

"In visits through mills I see evidence of snapped and sledded cotton at the pickers, around the trumpets on cards, on the guide boards, and I was much surprised to learn that mills do not even know they are using snapped or sledded cotton.

"In the Southern Textile Association we have worked for years trying to reduce the beating of cotton as much as possible, eliminating every beating process that it is possible to eliminate, for we realize and have known for some time that the more the cotton is beaten, the weaker the fibers become, resulting in bad running work, higher cost, a larger percentage of waste and weaker yarns.

"Now it seems that the work we have been doing, the thousands of dollars we have saved the mills, the high quality and increased breaking strength of yarns we have been able produce will be of little consequence if something is not done regarding the vast amount of snapped and sledded cotton that is gathered today.

"Snapped cotton is beaten to death before it ever reaches the mill, by the treatment it receives in order to remove the leaves, sticks, stalk and bowls and in using such cotton no mill can expect anything in the way of high quality of product and low cost in comparison with product and cost from the use of the same grade of cotton gathered in the regular way.

"Therefore, you can see the necessity of immediately beginning to build up data to show the mill presidents and treasurers that they must not pay as much for snapped low middling cotton as they pay for low middling gathered in the regular way, and The Arkwrights expect to be able to make a report on this matter in the near future."

Four Members Elected

It was announced that the tests prepared by S. A. Black, night superintendent, Mill No. 3, the Lancaster (S. C.) Cotton Mills; R. W. Arrington, superintendent, Union Bleachery, Greenville, S. C.; P. A. Smith, superintendent, Ninety Six (S. C.) Cotton Mills; and W. H. Gibson, Jr., superintendent, Aileen Mills, Biscoe, N. C., as a basis for membership had been accepted as satisfactory to the research committee and these gentlemen were elected to full membership.

Other business that followed was the assignment of eleven tests and the reassignment of one test.

Cellulose Plant Starts

Massasoit Utilizing Rice at Lake Charles, La.

FALL RIVER, MASS.—The Massasoit Mfg. Co., of this city, which is one of the pioneers in the utilization of cotton waste products, started the only plant in the world of its kind, making cellulose from rice hulls and rice straw, this week at Lake Charles, La. It is the fifth unit of the company.

First experiments with rice hulls were made about two years ago at the Oakdale plant of the Massasoit upon the suggestion and with the cooperation of the Lake Charles Rice Milling Co., adjacent to which the new cellulose plant has been constructed. Heretofore rice hulls had been burned up in the furnaces, being considered worse than useless and involving a serious disposal problem for rice millers.

By reason of its broad experience with waste products, the Massasoit Mfg. Co. visioned the possibilities of reclaiming this "worthless chaff" and turning it into cellulose, a product used as a base for many highly valued commodities already known to industry, and other articles destined to be developed. Cellulose is used in the making of rayon, artificial leather, motion picture films, automobile lacquers, celluloid, translucent paper for candy boxes, wall molding, etc.

The new cellulose plant is located on what were the Long-Bell properties situated on the south bank of the Calcasieu river at Lake Charles, La., covering approximately five acres. Six modernly-constructed buildings comprise the plant. The whole project involving upwards of $200,000, has required less than eight months from its breaking of the ground to the completion of the entire plant. At present 500,000 pounds of hulls are being utilized and the yearly capacity is estimated at close to 16,000 tons. A storage warehouse for sheltering the ground hulls has been built, having a capacity of 5,000 tons, sufficient for a six months run after the rice milling season has closed.

Grinding and storing commenced late in November, but the complete process of converting the raw material into cellulose has just now been started.

Fall River Cotton Manufacturers Elect

FALL RIVER, MASS.—The Fall River Cotton Manufacturers' Association elected officers for the ensuing year on Monday as follows: President, James E. Osborn; vice-president, Frank L. Carpenter; secretary-treasurer, Charles E. Smith. Member of executive committee, three years, James Sinclair; associate members executive committee, one year, Simeon B. Chase, J. Whitney Bowen.

James Sinclair succeeded W. Frank Shove on the executive committee upon Mr. Shove declining to serve further.

THE PERSONAL PAGE

MOBILE, ALA. John A. Davis has accepted the position of overseer of the cloth room of Mill No. 5 of the Cotton Mills Products Co., a position he formerly held.

JEWETT CITY, CONN. John A. Waugh has taken the position as overseer of carding for the Ashland Cotton Co. Mr. Waugh comes from Coventry, R. I.

MIDDLETOWN, CONN. Louis H. Russett has become sales manager of the Wilcox Lace Co. He was until recently with the Burns Lace Mfg. Co., also of Middletown.

MANCHESTER, ENG. The name of Percy Bean, English author of standard works on cotton sizing and finishing is familiar to nearly all textile men concerned with

Percy Bean

those divisions of the industry but few have met him personally. Consequently the accompanying photograph should prove of interest. Mr. Bean, whose headquarters are in Manchester, England, is the author of "The Chemistry and Practice of Sizing," in the preparation of which F. Scarisbrick collaborated; and of "The Chemistry and Practice of Finishing," which was done with the collaboration of William McCleary. Mr. Bean lectures on textile chemistry at the Blackburn College of Technology, the Darwin Technical School, and the Harris Institute, at Preston.

NORWICH, CONN. The fire brigade of Schwarzenbach, Huber & Co., had its second annual banquet on Feb. 23. Supt. M. L. Bergstresser was toastmaster. L. M. McCormick of the West Hoboken office and Louis M. Crandall were speakers. The date marked the 20th anniversary of the coming of Mr. Bergstresser to Norwich and the 14th anniversary of the establishment of the Schwarzenbach-Huber mill in this city.

TAFTVILLE, CONN. Thomas Greenwood, overseer of weaving for the Ponemah Mills, has retired. He was connected with the Ponemah company for 40 years.

EATONTON, GA. At a recent meeting of the directors of the Imperial Cotton Mills, J. J. Barnhardt, vice president of the Cannon Mfg. Co., Kannapolis, N. C., was elected president, succeeding M. L. Cannon.

MACON, GA. J. L. Lindsey has been promoted from second hand to overseer of carding at the No. 2 Mill of Bibb Mfg. Co. James Sanders succeeds Mr. Lindsey as second hand.

BOSTON, MASS. E. O. Smith, secretary of the Universal Winding Co., sailed on the S. S. Leviathan Feb. 26 for a three months' business trip to England, the Continent and Russia.

BOSTON, MASS. George R. Kay, who has been overseer of mule spinning in the Rockdale Mill of the Paul Whitin Mfg. Co., Northbridge, Mass., is now associated with the Textile Development Co., Boston, Mass.

DRACUT, MASS. William E. Chamberlin has taken a position as overseer of finishing with the Merrimack Woolen Corp.

EAST DEDHAM, MASS. Thomas F. Hughes, of Providence, R. I., has been engaged as bleaching superintendent by the Hodges Finishing Co.

FALL RIVER, MASS. William E. Frain has resigned as overseer of spinning in the Globe Yarn Dept. of the Connecticut Mills Co., to accept a position with the Firestone Cotton Mills.

GILBERTVILLE, MASS. Joseph Ferron, for 16 years overseer of the carding department of the George H. Gilbert Mfg. Co., has resigned that position.

GILBERTVILLE, MASS. Merle E. Gilson has accepted the position of overseer of the carding department of the George H. Gilbert Mfg. Co. He comes from Chicago, Ill.

HOUSATONIC, MASS. T. Ellis Ramsdell, agent for the Monument Mills, sailed from New York on Feb. 24 on the S. S. Pastores for a month's trip to the Caribbean Islands. He will visit Havana, Kingston and Trinidad.

LAWRENCE, MASS. Ellis Laycock, who recently tendered his resignation as agent of the Uswoco Mills, Lawrence, Mass., was tendered a complimentary dinner by the office staff, superintendents, and overseers and presented with a watch of white gold. Philip N. Glazier acted as toastmaster, and among the speakers were Carlyle D. Fisk, Joseph E. Murphy and David F. Murphy.

MILLBURY, MASS. William W. Windle, president and treasurer of the W. W. Windle Co., and Mrs. Windle, have returned to their winter home at Pinehurst, N. C., following a visit to Millbury.

MILLBURY, MASS. Henry A. Cole has resigned his position as assistant superintendent of the Felters Co. He has been succeeded by James B. Manning, who has been night superintendent of the Felters plant.

MILLVILLE, MASS. F. Alport Hayes has resigned his position as general manager of the Lawrence Felting Plant, effective March 1. Other officials who retired at the same time are Harold Erwine and John Butler.

NEEDHAM HEIGHTS, MASS. Roscoe A. Carter, assistant treasurer of the William Carter Co., knit underwear, Needham Heights, Mass., spoke at the University Club, Boston, Mass., Monday evening at the second of a series of meetings under the auspices of the Club's Department of Education and Vocation, his subject being "Manufacturing as a Career."

FALL RIVER, MASS. Richard H. Fish has been elected a director of the Arkwright Mills, to succeed Charles B. Cook, resigned. Mr. Fish was formerly superintendent of the Flint Mills and

Richard H. Fish

came to the Arkwright Mills during the worst of depression and in five months had the mill running 100%. As a result of Mr. Fish's efficiency he has been placed on the board as a manufacturing director with George H. Waring, Thomas D. Covel, Elmer S. Sears, William H. Jenning, J. Ed. Newton, treasurer and J. Wesley Hutchinson, clerk.

NORTH ADAMS, MASS. George B. Flood, assistant treasurer of the Arnold Print Works, Inc., has been re-elected president of the North Adams Chamber of Commerce.

SAXONVILLE, MASS. Edgar R. Jones has resigned as master mechanic at the McCleary, Wallin & Crouse branch of the Mohawk Carpet Mills, Amsterdam, N. Y., to take the position as plant engineer of the Roxbury Carpet Co.

WALTHAM, MASS. William Nethercote has resigned as assistant foreman of the machine shop of the Otis Co., Ware, Mass., to accept a position with the Waltham Watch Co.

WARE, MASS. Frederic B. Clark, who has been with the Otis Co., has been appointed office manager of the new Ware Valley Mfg. Co., which will operate the former No. 3 mill of the Otis Co.

WHITINSVILLE, MASS. Sydney R. Mason, secretary of the Whitin Machine Works, and Mrs. Mason, sailed from New York on the S. S. Columbus on Feb. 22 for a 25-day cruise to the West Indies.

WORCESTER, MASS. Matthew P. Whittall, president and treasurer of the M. J. Whittall Associates, Mrs. Whittall and their daughter, Miss Betsey Whittall, who arrived in Honolulu on Feb. 2 on a pleasure trip, are expected to return home about the middle of March.

WORCESTER, MASS. George E. Duffy, president and treasurer of the George E. Duffy Mfg. Co., has been elected treasurer of the Royal Worcester (Mass.) Corset Co., in addition to his office of president to which he has been reelected.

PETERBORO, N. H. Albert W. Noone, proprietor of the Joseph Noone's Sons Co., of this city, is vacationing at Miami, Fla., being registered at the McAllister Hotel. Mr. Noone, in addition to being a woolen manufacturer, has been active in politics. He was Democratic candidate for governor of New Hampshire in 1914 and a delegate to the Democratic national convention in 1916. He expects to remain in Miami until April.

AMSTERDAM, N. Y. A. W. Shuttleworth, vice-president of the Mohawk Carpet Mills, and family, sailed Feb. 26 for a month's cruise to points of interest in the West Indies.

AMSTERDAM, N. Y. B. H. Lichtman, head of the Progressive Silk Mfg. Co., has returned from an extended sojourn in Bermuda.

COHOES, N. Y. Wm. Starr has been appointed superintendent of spinning at Plant No. 2 of the Harmony Mills.

FONDA, N. Y. H. Y. MacNeil, treasurer of the Fonda Glove Lining Co., is spending several weeks in Florida.

FONDA, N. Y. William Collins has taken the position of superintendent of the night shift at the plant of the Fonda Glove Lining Co.

FORT PLAIN, N. Y. George Duffy, for many years president of the Duffy Silk Co., has returned home after several weeks' vacation at Battle Creek, Mich.

GOUVERNEUR, N. Y. William S. McKewen has resigned as president of the International Lace Co. and W. J. Dinan has been elected his successor. Mr. McKewen served as president for the last four years.

HUDSON, N. Y. B. D. Connell has taken the position as overseer of carding for the Thermo Mills. Mr. Connell comes from Laconia, N. H.

UTICA, N. Y. E. T. Foxenberg has taken the position as general manager of the traffic department at the plant of the McLoughlin Textile Corp.

ASHEVILLE, N. C. E. A. Kiser, overseer of finishing for the Martel Mills, Inc., has been promoted to superintendent of that plant.

Valves in Textile Mills

Types, Details of Construction, and Points to Be Considered in Making a Selection—Blow-Off and Non-Return Valves—General Suggestions Regarding Care—Emergency and Remote Control—Safeguards—Ladders, Platforms, Chains, Extension Rods, and Other Aids to Accessibility

By Charles L. Hubbard

IF any one item of equipment in a piping system can be said to be of more importance than another, it is the valves. A textile mill of even moderate size contains hundreds of valves, and numerous mills contain thousands. They are of various kinds, used for all sorts of purposes, and

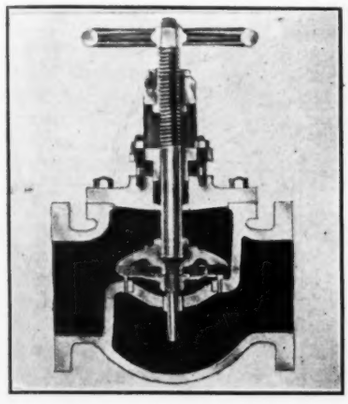


Fig. 1. Typical Globe Valve of Larger Size

placed in locations both easy and difficult of access. It is not the purpose of the present article to say so much about the design and construction of the valves themselves, which are best obtained from catalogs, as the way in which they should be selected and used.

There are many kinds of valves besides the ordinary "stop" valve, such as safety valves, reducing valves, back pressure valves, air valves, and regulating valves of various types, practically all of which are found in the average textile mill; but we shall confine ourselves to the first mentioned, saving the others for a future article.

Types of Valves

Stop valves for ordinary service and connection with steam and liquids are divided into two general classes, the *globe* valve and the *gate* valve. To these may be added the plug cock, which is employed for special purposes as described later.

Each type of valve is made in a great variety of forms; although the chief differences are in matters of detail, the general principles being practically the same in all makes. A typical globe valve is shown in Fig. 1, and will serve to illustrate this class without special description.

Globe valves are cheaper than gate valves, and in the smaller sizes will answer many purposes as well. When used for throttling, they are preferable because the wire-drawing of steam, and the high velocity of a liquid through a small opening will tend to score the seat. In the case of a globe valve slightly opened, the flow is distributed over a greater exposed surface, and the scoring effect is therefore less. Furthermore, the seats of globe valves are more easily renewed or reground than those of many gate valves.

Difficulties with Gate Type

An inspection of the general principle of the globe valve (see Fig. 1) will show characteristics which have an important bearing upon its selection for certain uses. First, if used in a steam pipe or "dry" return, with the stem vertical, condensation flowing along the bottom of the pipe must rise to the center before it can flow through the valve. This is objectionable, as it not only reduces the capacity of the pipe for carrying steam but is almost sure to produce water-hammer under certain conditions. When steam is passing through at high velocity the condensation will be carried with it, but for return pipes the valve should be set with the stem in a horizontal position—or a gate valve should be used. If employed for a liquid, this objection disappears, although it produces more resistance to flow than a straight-way valve.

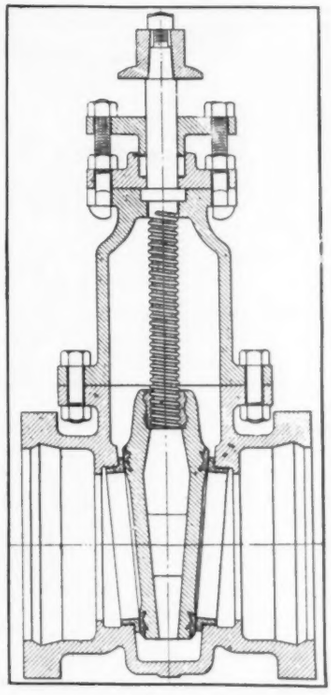


Fig. 3. Gate Valve With Inside Screw

The objection to globe valves in boiler or engine connections is that they open rapidly for a small movement of the hand wheel. In cases of this kind it is desirable to pass steam through the valve very slowly, until the engine is warmed up, or the pressure equalized between the boiler and the main header. This objection also holds in the case of any other piece of apparatus into which it is desirable to pass the steam or liquid very slowly at the start. When for various reasons

Fig. 2. Angle Valve

a globe valve is preferable in a given case, this objection can be overcome by using a valve with a by-pass of small size, as illustrated in Fig. 15. The small valve is opened slowly until the pressure is equalized, after which the main valve is opened.

Pressure Above or Below?

In locating globe valves it is a disputed question whether the steam pressure should be on top or underneath the valve. With the pressure on top, the stem cannot be packed without shutting off steam from the entire line; but, on the other hand, if the valve closes against the pressure the entire load is thrown on the threads. While stripping sometimes occurs after long continued use, it is not common in the case of well-constructed valves with heavy threads. When the pressure is on top, the valve may become detached from the stem without giving evidence of it, and remain closed when it is supposed to be open.

Angle Valves

The angle valve, shown in Fig. 2, is subject to the same restrictions as the globe valve, but can frequently be used to advantage in close quarters, as it saves the use of an extra elbow.

Gate Valves

Typical gate valves are shown in Figs. 3 and 4. These have the advantage of giving a straight passageway when fully open, thus offering a minimum of resistance to flow. Furthermore, they may be opened very slowly when first turning on steam. They should not, however, be used for throttling purposes for reasons previously stated.

Gate valves are commonly used in all sizes for most first-class work in connection with steam, and for liquids where it is desired to reduce the resistance to a minimum. They are of two general classes: the inside screw, and outside screw with yoke.

The first of these is shown in Fig. 3, and is commonly used in large sizes where space is limited, and also in cases where the valve is not frequently used. Gate valves less than 4 in. in diameter are usually of the inside screw pattern, being simpler in construction and more compact. The objection to this type of valve, especially for large sizes in high-pressure work, is the fact that it is impossible to tell whether it is open or closed from its external appearance.

The outside screw and yoke pattern, shown in Fig. 4, overcomes this objection, and also has the advantage of a screw which can be cleaned and oiled, which is a matter of considerable importance in the case of large high-pressure valves which must work as easily as possible. This type of valve takes up more room, owing to the height of the stem when open; but where there is sufficient space, it is commonly used in the best class of

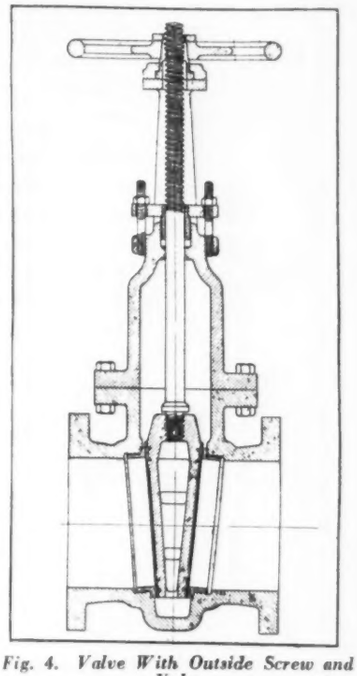


Fig. 4. Valve With Outside Screw and Yoke

work for sizes of 4 in. and over, for both high and low pressures.

Valve Details

Mention has already been made of by-pass valves for use on high pressures, for the purpose of equalization and thus permitting an easy opening

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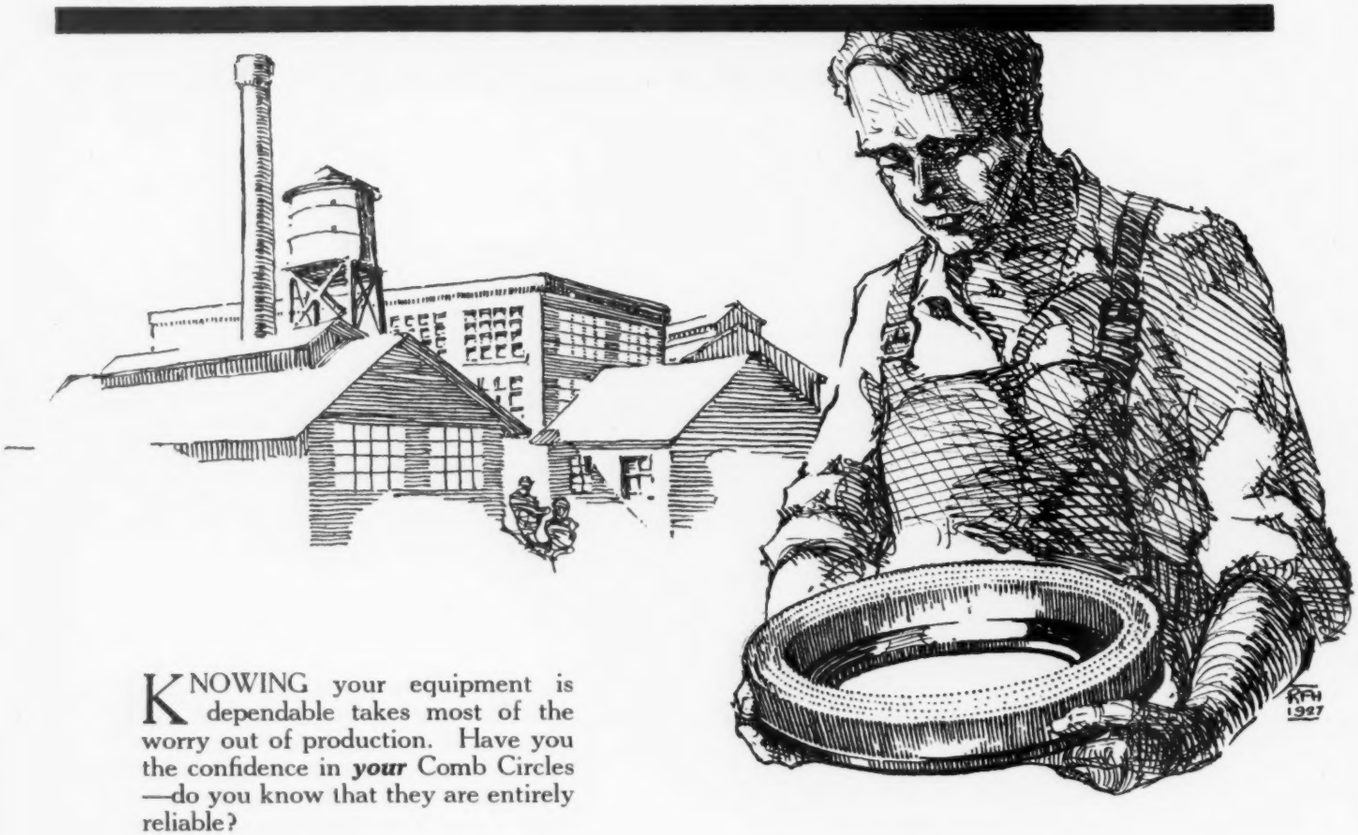

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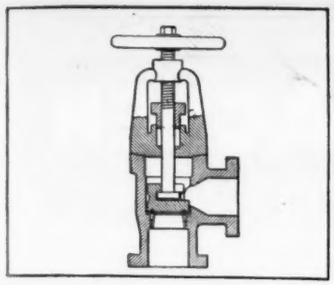

Fig. 5. One Form of Blow-Off Valve

of the main valve. Since the load on the disc of an 8-in. valve under 200 lbs. pressure is over 10,000 lbs., the necessity of at least partially equalizing the pressure on the two sides before attempting to raise the gate is apparent. Another advantage of the by-pass is the avoidance of the wire drawing of the steam which results when the main valve is opened slightly with pressure on one side only.

By-pass valves are recommended on all high-pressure work for 6 in. and over in size. The material of the different parts of a valve will depend somewhat upon its size and also upon the purpose for which it is to be used. In general, both globe and gate valves are made in all brass or bronze in sizes up to and including 3 in., while valves with iron bodies and bronze fittings start at 2 in. For ordinary work it is customary to start with iron bodies at 2½ in.

The weight in either case will depend upon the pressure to be carried. Ordinarily, for pressures from 125 to 150 lbs., medium-weight gate valves are suitable, with cast-iron bodies, bonnets, discs, and yokes, and with bronze seats and disc rings. If the valves are for water service the stem should be of bronze; otherwise rolled steel may be used. For pressures of 150 to 250 lbs., extra-heavy valves should be employed with semi-steel bodies. For high-pressure superheated steam, gate valves should be extra heavy with cast-steel bodies, bonnets, discs, and yokes while the seats, disc rings, and stem should be of monel metal or nickel steel.

For exhaust and other low-pressure work, sizes from 2½ to 12 in. are made standard weight, suitable for 125 lbs. For larger sizes, special low-pressure valves designed for a working pressure of 25 lbs. are sometimes used where conditions warrant it, although some engineers recommend standard weight for all pressures below 125 lbs.

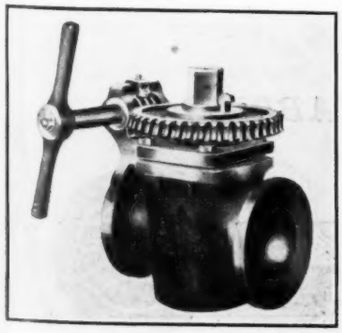

Fig. 6. Plug Cock Operated by Worm Gearing

Entirely of Iron

Valves constructed entirely of iron are made for places where no brass mountings of any kind can be employed on account of corrosion. Valves of this kind are adapted to the handling of dyestuffs, caustic potash, different acid and alkaline solutions, etc., and are therefore of special interest in textile work.

One of the most important details

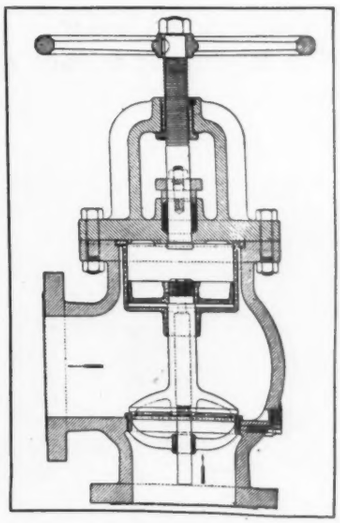

Fig. 7. Simple Form of Non-Return Valve

of a valve is the disc or seat, and the proper material for any given case should be left to the judgment of the manufacturers. Different steam pressures and temperatures require different materials, as well as the various solutions handled in mill work, and the exact conditions to which the valve is to be subjected should always be submitted to the makers and their advice followed in making a choice. This of course applies to companies of established reputation.

Blow-Off Valves and Cocks

With the exception of the feed pipe, the blow-off is the most important pipe connected to a steam boiler, since the safety of the boiler depends upon it, both when the plant is in operation and when it is idle. Blow-off valves are made in three styles; the gate valve, plug cock, and specially constructed angle valve. Globe and angle valves are not usually recommended where much small hard scale is encountered, but for soft scale and mud they are both reliable and durable.

The special angle valve is made in a great variety of forms, one of which is shown in Fig. 5. The requirements of a good blow-off valve are that it shall furnish a free passage for scale and sediment, close tightly, and open easily without sticking or cutting. On account of the hard service to which it is subjected, it is made extra heavy, and frequently the valve seat is depressed, as shown in Fig. 5, to produce a shearing effect on any scale which may have lodged in the passage. In certain makes, special means are provided for cleaning the disc and seat by a jet of steam or water after the fluid is practically shut off, but before the valve is finally closed.

When hard scale breaks off in small pieces, it is a good plan to put an asbestos-packed plug-cock next to the boiler, and then a gate or angle valve. The latter is opened first and closed last. By this means a tight blow-off may be maintained at a minimum expense, as the cock may be opened and closed quickly and has a shearing effect on the scale without special injury. One objection to the cock is that it tends to stick and give trouble in starting. Various means have been employed to overcome this, one of which is illustrated in Fig. 6. In this case the plug is turned by a worm and wheel, which gives great leverage and slow movement, both of which are desirable. In other cases, the first movement of the wrench or lever lifts a taper plug slightly from its seat and thus loosens it, while a further movement opens it.

Great care should be taken to observe and remedy all leaks in the blow-off connections, as it is a constant drain on the boiler and capable of both loss of heat and danger to the boiler. The cocks used for this purpose should be either bushed or solid asbestos-packed, of straight-way design with flanged connections, and

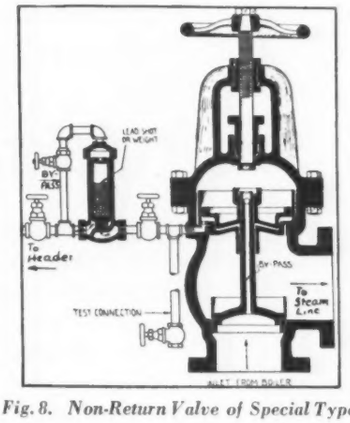

Fig. 8. Non-Return Valve of Special Type

the minimum area should not be less than the blow-off outlet from the boiler. Stops limiting the plug to full open and closed positions are desirable, as giving visual indication of the condition of the opening in the plunger.

Non-Return Valves

These are a combination check and stop valve, and their office is to equalize the pressure between the different boilers of a battery, and to prevent the steam from one unit passing through or into a boiler which has been damaged or which is not in use. In case a tube blows out, and the pressure begins to drop, the valve closes automatically and prevents steam from the main header passing into the damaged boiler. It also acts as a safety stop to prevent steam being turned into a cold boiler while men are working

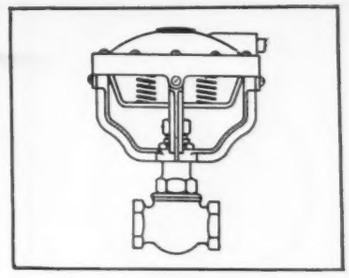

Fig. 9. Small Pneumatic Valve

inside, because it cannot be opened when there is pressure on the header side only.

A typical valve of this kind is shown in Fig. 7, and illustrates the general mechanism. Instead of being attached to the stem, the valve is provided with a guide and dash-pot and is free to move up and down when the stem is at its highest point, as in the cut. In this case, steam flowing from the boiler holds the valve open and passes freely into the discharge pipe. Should the pressure suddenly fall in the boiler, the direction of flow would be at once reversed and the valve would close like an ordinary check. The valve may be held closed against boiler pressure by screwing down the stem in the usual manner.

The valve shown in Fig. 8 acts in the same manner as the valve shown in Fig. 7, and also serves as a protection in case of accident to the steam header or main beyond the valve. If a rupture occurs on the steam line, the action of the pilot valve, shown at the left, together with the double dash-pot arrangement, closes the valve against boiler pressure. Ordinarily, the pilot valve is set for about 8 lbs. variation between the boiler and header pressures, although it may be made either more or less, as desired, by simple adjustments. Non-return valves are generally used in connection with a

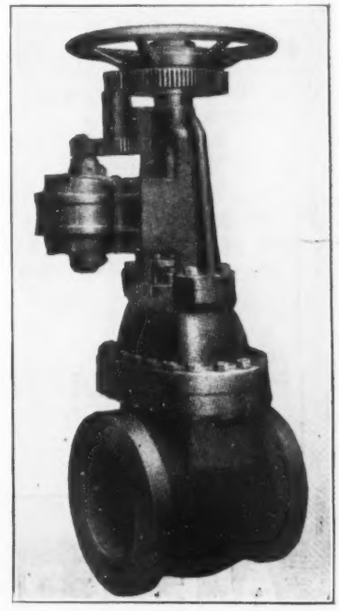

Fig. 10. Electrically Operated Gate Valve of Large Size

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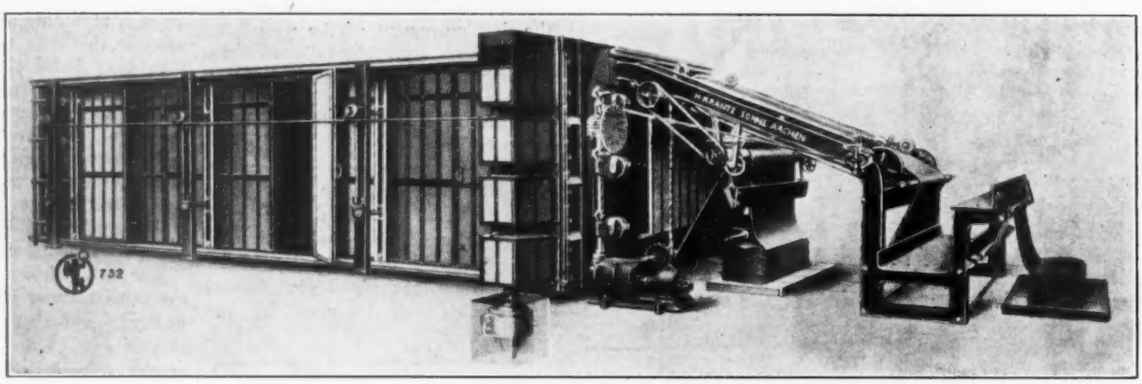

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Advantages

The drying effect obtained is equal to outdoor-drying,
because the cloth is dried by gradually warmed air currents only, and cooled in the machine.

Separate circulating air current of suitable temperature
for every two layers of cloth, one above another.

No drying up of the cloth,
as there are no heating pipes and therefore no radiating heat inside of the machine or below the layers of cloth.

Machine is very accessible,
as there are several doors in each wall and no air channels outside the machine.

Extraordinary small room for heating arrangement,
all fans and heating chambers being placed in a small compartment close to the machine.

Large hourly output, as much as 10 times the holding capacity
of the machine can be dried per hour (1 yd. of cloth weighing approx. 16 oz.).

Utilization of the heat of all the used air currents
between the two top layers for pre-drying of the wettest cloth layers.

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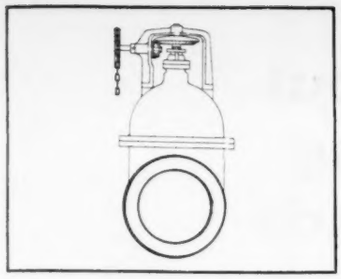

Fig. 11. Vertical Overhead Valve Operated by a Chain and Sprocket

gate valve, the former always being placed next to the boiler.

In General

Valves are to steam, air, and water systems what switches are to electric systems, and not only control the operation but the safety of the plant. For this reason, they should be of high-grade material, carefully chosen for the service in which they are to be placed, and kept in the best of repair. Valves should never be allowed to leak, as this means unequal wear on the disc and cutting while corrosion produces sticking as well as general deterioration.

It is stated on reliable authority that a ½-in. valve stem with an ordinary leak entirely around the stuffing box will blow 40 lbs. of steam per hour under 100 lbs. pressure. When this is multiplied by the number of leaky valves of all sizes often found in a textile plant, the fuel waste amounts to a large item.

One cause of leaks is distortion due to the weight of piping carried by the valve. Hence, the method of support should be looked into in the case of the larger sizes. Small valves are often distorted by twisting the body with a wrench when connecting into the piping system.

All valves should be operated slowly, and observance of this suggestion will not only result in keeping the valve in better repair but save wear and tear upon the piping and machinery. No wrench or bar should ever be used on hand wheels. If a valve cannot be moved in the ordinary way, the bonnet should be removed and the trouble ascertained.

Emergency and Remote Control

Valves may be operated from a distance, either as a matter of convenience or in case of emergency, by means of compressed air, water pressure, or electricity.

A pneumatic valve of small size is shown in Fig. 9. These are made both with rubber diaphragms and copper bellows or sylphon. The former are not adapted to locations where they are exposed to very much heat, and in any case the rubber is likely to become hard and crack after a time. They should only be used in fairly cool places and for low steam pressures.

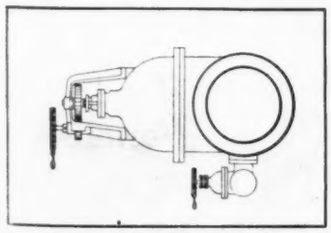

Fig. 12. Horizontal Valve Operated in a Similar Manner

All-metal valves should, in general, be used for remote control, and always in case of higher pressures. These valves are durable and are not affected by the high air temperatures to which they are liable to be exposed.

Pneumatic valves are especially adapted to cases where they must frequently be used and to locations which are not easily accessible, as on the sections of hot-blast heaters and dryers, branch lines of piping to different departments, etc. They are operated from a control switchboard by means of "three-way" cocks. The air pressure for operating valves of this kind is furnished by a small automatic compressor driven by steam, electricity, or water pressure, as most convenient. If, for any reason, water pressure is preferred, it may be used in the type of valve described above but air is quicker in action and may be exhausted directly into the atmosphere when relieving the pressure and opening the valve.

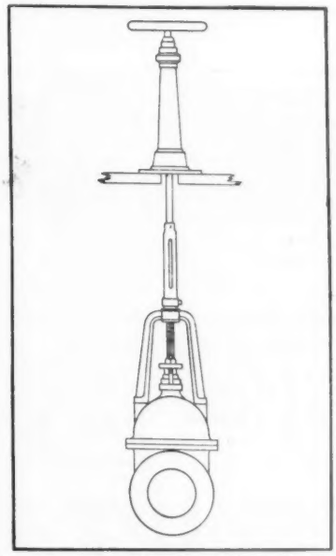

Fig. 13. Floor Stand and Extension Rod

Special hydraulic gate valves are also used for emergency service, in which a cylinder and piston take the place of the chamber and diaphragm of the pneumatic type. Two pipes lead to the cylinder, one at each end, and are connected with a three-way cock in such a manner that by throwing the lever in one direction the valve is closed; and, in the other, it is opened. This device is especially adapted to gate valves where a high lift is required.

Electrically operated valves are used for the same purpose as the hydraulic valve, and are easier to connect up where the distances are greater. A large valve of this type is shown in Fig. 10, being driven by an electric motor. The speed of the motor is reduced through a train of gears, and the arrangement is such that the current is cut off automatically at the instant the valve gate reaches an open or closed position. The motor and all connecting gears are enclosed in a casing not shown in the cut. Gate valves of the hydraulic and electric type, up to sizes of 12 or 14 in., are adapted to emergency operation in high-pressure mains leading to engine rooms and separate buildings in plants of large size.

Safeguards

As many accidents have been caused by opening or closing a valve at an inopportune time, it is necessary to mark them in such a way that they will not be disturbed during the performance of some particular work. Under routine operating conditions there is need for locks, tags, and signs, warning of danger or definitely prohibiting manipulation. When unusual work is being done, such as the repairing or cleaning of boilers, installing of equipment, etc., special precautions are necessary. The men doing such work set the valves as required, and it is important that they remain so until the job is finished.

There are various safeguards employed for this purpose, such as warning tags on wheels or stems, and wheel covers, which usually take the form of a metal box hooked or locked over the wheel. In other cases, the hand wheel is removed. In those cases where inopportune opening or closing of the valve would be unusually dangerous, signals of conspicuous character must be employed.

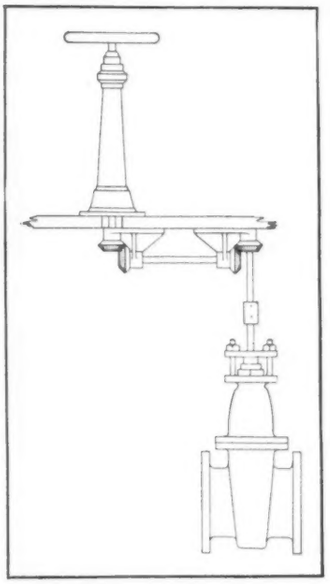

Fig. 14. Floor Stand and Offset

Accessibility

Accessibility is often a matter of the greatest importance, and still is often lost sight of by those designing or installing the piping system of a large plant. Emergency shut-off valves in high and low pressure mains may be used only at infrequent intervals, but conditions require that they should be easily reached for quick action in case of necessity, unless equipped for remote control, as previously described. On the other hand, there are valves which are used only for cutting out sections of the piping when making repairs or installing new equipment where quick action or convenience is of minor importance. Between these extremes is a great variety of conditions embracing valves of all kinds, and requiring a greater or lesser degree of accessibility according to their use.

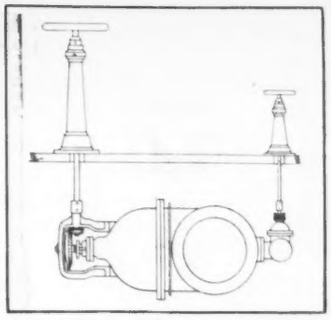

Fig. 15. Similar Arrangement Applied to a Horizontal By-Pass Valve

While standard valves are adapted to most conditions, there are various ways of fitting these to awkward positions by slight changes and simple attachments which are not generally known.

Ladders and Platforms

For overhead valves, in accessible places, which are not frequently used, the simplest arrangement is a substantial wooden ladder with steel spikes at the bottom to prevent slipping. This is easily carried from place to place and stored out of the way when not in use.

For frequently used valves located near columns, walls, or boiler settings, a permanent iron ladder of light construction anchor-bolted to the building wall will be found more convenient. If the valve is of such size that it can be manipulated with one hand, the ladder alone will answer all purposes; but if it is of such size that both hands are required, a small platform or other footing will be necessary so that the man may brace himself and easily maintain his balance while manipulating the valve.

For reaching valves in boiler leads and main header, or in other cases when a number of important and frequently used valves are grouped together, it is best to provide a platform

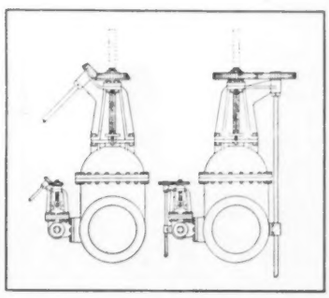

Fig. 16. Overhead Valves Operated by Extension Rods and Gearing

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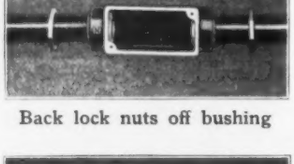
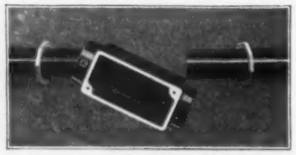


Back lock nuts off bushing

Push bushings inside box



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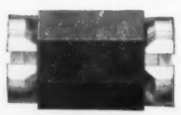

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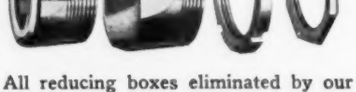

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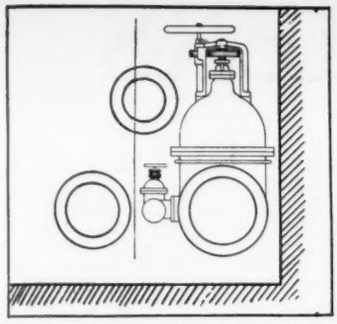

Fig. 17. Use of Offset Handwheel to Clear Wall

and permanent iron ladder. A structure of this kind may consist of an angle-iron frame or border filled in with a heavy wire netting having a sufficiently fine mesh to give a substantial footing. Wire for this purpose should be from 3/16 to ¼ in. in diameter, depending upon size of platform and distance between supports.

The method of support will depend upon location and character of adjacent construction. In some cases it can rest upon the boiler top or setting, while in others it must be partially or wholly supported by overhead hangers or anchor bolted to the wall.

The distance of the platform below the valves should be such that a man of ordinary height can easily reach the hand-wheels when standing upright. When possible, the arrangement should be such that the engineer can step directly from the ladder to the platform without passing under a pipe.

Chains and Extension Rods

In certain isolated cases, where valves are in more or less frequent use, it will be simpler and more convenient to use sprockets and chains which may be reached from the floor, than to provide ladders. For valves of small and medium size, an enlarged sprocket takes the place of the usual hand-wheel, while for larger valves the necessary leverage is obtained by the use of gearing, as shown in Figs. 11 and 12.

In other cases, extension rods are used, both for valves located at an elevation and below the engine room floor. A typical arrangement adapted to cases where the main supply and exhaust piping of the engines or turbines is carried in a space beneath the engine room floor is shown in Fig. 13. This consists of a stand supported on the floor, and carrying an extension rod which is attached to the regular valve stem below.

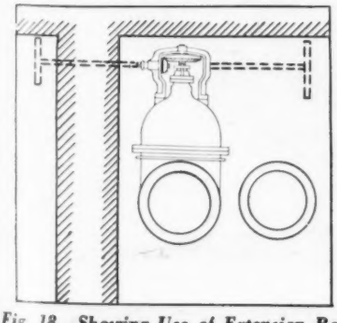

Fig. 18. Showing Use of Extension Rod and Gearing in Close Quarters

When for any reason the valve-stand cannot be placed directly above the center of the valve, it may be offset by the use of a horizontal shaft and bevel gears, as illustrated in Fig. 14. A special arrangement for a large by-pass valve placed upon its side is shown in Fig. 15.

Extension rods for overhead valves are illustrated in Fig. 16. In one case the rods are brought down vertically and in the other at an angle, details which depend upon the location and the obstacles encountered between the valve and point of operation.

Gearing is made use of in various ways, especially in the case of large valves which have to be placed in cramped quarters. In Fig. 17, the

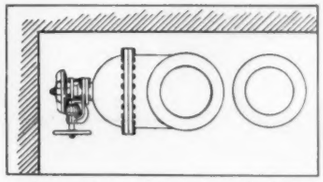

Fig. 19. Another Awkward Problem Overcome by Use of a Geared Valve

main runs so close to the wall that there is not sufficient space for the regular hand-wheel of large size, while adjacent pipe lines prevent turning the valve on its side or at an angle. By using a gear and pinion, the wheel is offset so as to clear the wall, and at the same time makes it

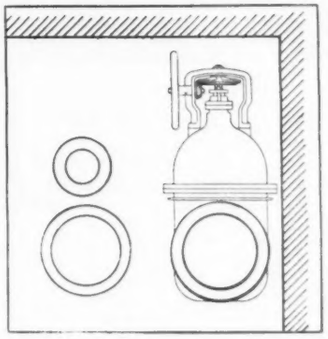

Fig. 20. Still Another Arrangement of a Similar Kind

possible to use one of smaller diameter, which might be of decided advantage under certain conditions.

Fig. 18 shows a difficult case to overcome with an ordinary form of gate valve, as there is room in neither a horizontal nor a vertical position for the stem, and it is not desirable to connect a gate valve with the stem extending downward, for if not fully opened the projecting gate forms an obstruction to the flow of condensation along the bottom of the pipe similar to that already described in connection with a globe valve. By using a geared valve, and extending the stem horizontally in either direction, as most convenient, it is easily reached both for opening and closing and for removing the bonnet.

The use of similar valves in various positions is shown in Figs. 19 and 20.

Special Forms of Valves

There are a number of special forms of valves used around the plant

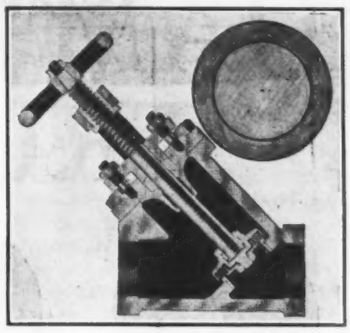

Fig. 21. Use of Angle Valve in Special Cases

to which attention should be called, among which are the Y valve, lever valve, quick-opening valve, and check.

The first of these, showing one of its many uses, is illustrated in Fig. 21, in which it fits into a place where an ordinary gate or globe valve could not well be used.

Lever valves are often convenient where the valve must be opened and closed frequently—as in certain kinds of process work. In Fig. 22, a valve of this kind is shown fitted into an awkward position where the usual type might not prove convenient.

Quick-opening valves are used for the same general purposes as the lever valve, but are made only in smaller sizes. The quick action is secured by a very steep thread on the spindle so that the valve is opened and closed by a single turn, or less.

Check valves are made straight-way, like ordinary globe valves, which are for horizontal pipes; also of the angle form, and a special type for vertical pipes. When ease in opening is desired, with slight pressure, the swing check may be used, and the force for opening may be still further reduced by turning the valve partially on its side, or by using a clapper of aluminum. When placed in the feed pipe of a boiler, where it is subjected to the pulsations of a pump, it should be provided with a spring to prevent chattering and damaging of the seat.

Fig. 22. Lever Valve Employed Where a Handwheel Might Not Be Convenient

Confer on Textile Accounting Problems

RALEIGH, N. C.—A textile conference to discuss development of more efficient and specific methods of cost accounting in textile mills, and bleaching and finishing plants as well as other phases of peculiar interest to the textile industry, will be held at the North Carolina State College, March 24 to 26.

Invitations have been sent out by Dr. Thomas Nelson, dean of the school of textiles, to all persons directly interested in the textile industries in the Carolinas.

The program includes a textile exposition on Friday afternoon, March 25, when all machinery at the school will be in operation. Visitors will be given an opportunity to observe latest methods of carding, spinning, weaving and dyeing. A new type spinning operation is also slated to be shown at this time.

The cost accounting lectures will be given by I. L. Langley, of the Consolidated Textile Corp., Lynchburg, Va., and Frederick Moore, certified accountant. R. W. Arrington, superintendent of the Union Bleachery at Greenville, S. C., will speak on the finishing and bleaching of goods.

Progress in the use of rayon and its possibilities will be the subject of a discussion led by E. R. McKee of the DuPont Rayon Co. Other features include an address by David Clark, and one by J. Larkin.

Annual Meeting of Waste Material Dealers on March 16

The Fourteenth Annual Meeting of the National Association of Waste Material Dealers at which will be elected a president for a term of one year, fifteen directors to serve for two years and one director to fill a vacancy, will be held at the Hotel Astor, New York, on Wednesday, March 16 at 10:30 a. m.

The annual meeting, together with the various division meetings and the fourteenth annual banquet on the evening of March 16 is expected to bring together the largest gathering of waste material dealers.

A meeting of the Woolen Rag Graders' Division will be held at the Hotel Astor on March 15, at 2:30 P. M. for the purpose of electing a chairman for the association's next fiscal year, and transacting any other business which may properly come before said meeting. The Cotton Waste Division will meet at 2 p. m., March 16 for the same purpose.

The association's nominating committee, composed of Clarence White, Nat E. Berzen and William Steck, with James Rosenberg, advisory member, will submit the following nominations to be acted upon:

For President: G. H. Rady, E. J. Keller Co., Inc., New York, N. Y.

For Directors for two years: Egmont L. Frankel, Frankel Bros., Ltd., Toronto, Ont.; Harry R. DeGroat, A. M. Wood & Co., Inc., Philadelphia; Carlton B. Overton,

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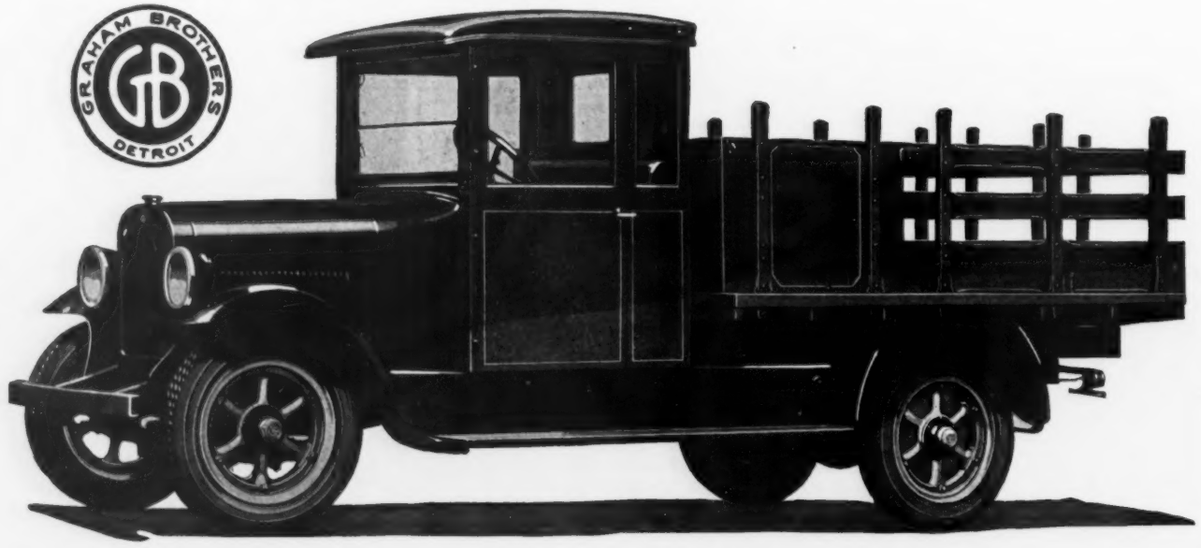

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For short term: Herman Goldstein, R. Goldstein & Son, Inc., Baltimore.

Protective Value of Fabrics

(*Continued from page 66*)

pends on the fitting of the garment. Clothing in practice is always fitted more or less loosely. The layer of air between the clothing and the body adds its effectiveness to that of the clothing in preventing the escape of heat from the body. The relation of fitting to protective ratio is important and will be studied soon.

The human body is at all times covered with a film of perspiration, which condition does not exist in the case of the oil cylinder. More or less ventilation exists in case of the clothed human body, that is, air may circulate between the body and its clothing. In the oil cylinder no circulation was possible since the fabric capsules fitted snugly. It is maintained that the protective ratios in Table 1 have relative value rather than absolute value. The oil cylinder is but a poor substitute for the human body; neverthless, each fabric used in the experiment performed under exactly the same conditions, therefore, the values given in the table have relative significance.

Table 3 shows that the protective ratio of the sample of blue flannel remains the same at all temperatures from 0° C. to 35° C., that is, in dry air. This result may not seem in keeping with our experience; however, it should be remembered that in open air the relative humidity changes with the temperature. Much research needs to be done on the subject of selecting clothing for use in air heavily laden with water vapor.

Experiments indicate that laundering a fabric having a nap lowers its protective ratio. This probably is due to the decrease of enmeshed air.

Table 4 shows little or no correlation between protective ratio and the mass of the fabric per unit area. Protective ratio probably depends on factors other than mass and kind of fiber; that is, wool or cotton.

The experiment indicates throughout that protective ratio probably depends almost entirely on the volume of enmeshed air. The relation of protective ratio to the volume of enmeshed air has been worked out in our laboratories, and results will be ready to report soon.

An Application of Treated Lumber

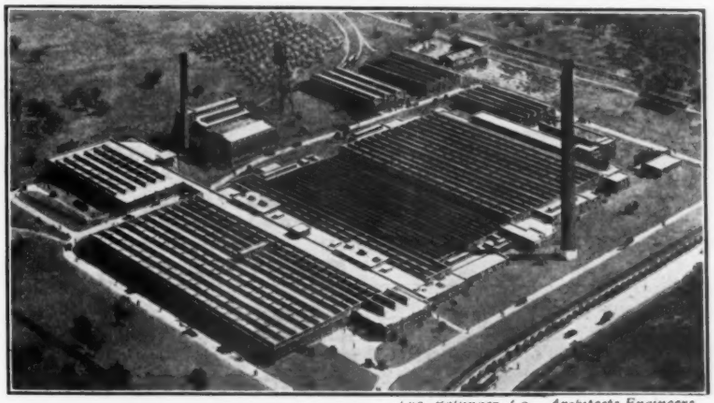
Engineer Describes Treatment of Roof Lumber With Wolman Salts for Viscose Company's Plant at Parkersburg, W. Va.

*By Clifford H. Shivers**

IN designing a modern building to be used for manufacturing purposes, it is frequently desirable to use wood in the construction for floors and roofs. It is a valuable insulating material and is comparatively cheap and readily adaptable to most any type of construction.

With the present-day method of conditioning the air where large percentages of moisture are constantly maintained, all engineers have experienced trouble with floor and roof timbers and planking decaying, due to the growth of fungus. The tendency today in designing a thoroughly up-to-date heating plant is to provide conditioned air containing a certain percentage of moisture; and, without doubt, the time is near when even our homes will be so heated. This brings us face to face with a very serious problem. We must protect the wood used in our buildings for construction purposes; if not, we will find it decaying in a few years, and replacements will be required, necessitating the expenditure of considerable sums of money, besides the inconvenience and interruption to production.

With these general conditions in mind, I have studied the art of wood preservation, to discover if, and how, lumber could be made to last the useful life of the building, even though used under conditions highly favorable to the development and progress of decay.



The Ballinger Co., Architects-Engineers.

Viscose Company's Plant at Parkersburg, W. Va.

Good Performance Record

The use of mineral and organic salt mixtures for the preservative treatment of timber has been so exclusively developed that it has now passed through the experimental stages, and its effectiveness is clearly established.

The Wolman process, making use of triolith with vacuum and pressure treatment in an impregnating retort, offers a fine record of performance in practical applications, and combines all the essential features called for. This material has been used in Germany for some 20 years. In certain locations in that country, where untreated mine timbers would last but six months, timbers treated with Wolman salts, have lasted ten years, and are still perfectly sound, with no signs of threatening decay.

Triolith possesses abundant toxicity, its principal ingredients, sodium fluoride and dinitro phenol, being very effective. As the impregnation process places these salts in the interior of the wood, which, in some degree, is fixed by the mordant action of the chromates used in the Wolman salts, and due to the fact that both ingredients are of low solubility, and not at all hygroscopic, even in a very humid atmosphere, there can be no movement of these salts to the surface, where they might be washed off by running water or blown away by air currents. On the other hand, impregnated salts are not liable to evaporation, nor can the evaporation of water carry any salt with it. These considerations are borne out by practical experiences showing that the retention of water-soluble salts of this character, properly impregnated, is thoroughly dependable.

It is established that the salts are strictly neutral to metals; and there seems to be no reaction between this preservative and white paint of good quality.

Specified for Viscose Co.

When I further learned, and became convinced that the preservative treatment actually made the lumber fire-retardant, I felt entirely justified in specifying that all lumber for the roof decks of the Viscose Company's plant at Parkersburg, W. Va., should be impregnated with Wolman salts by the standard full-cell vacuum pressure process.

An interesting incident with Wolmanized lumber occurred on this job. In the contractor's construction office were two large stoves used for heating. The watchman gathered a quantity of end cuttings from the three-inch roof plank and cut them up into kindling, but when they started the fires in the stoves, there was so much difficulty in getting the kindling to burn that they had to discontinue its use and obtain other material for this purpose.

Approximately two and a quarter million feet, board measure, of long leaf yellow pine roof decking was impregnated with one-quarter pound of dry triolith (Wolman salts) per cubic foot. The lumber was treated under the direction and supervision of Galen Wood, consulting engineer, specializing in wood preservation. The Viscose Co. also had their own engineers at the treating plants, so that the treating was carried through in the most approved manner.

The lumber was shipped green and steam-seasoned in the retorts of the treating plants before the injection of the preservative solution. After treatment, the material was immediately shipped to the mill site (loaded from retorts to cars), where it was carefully stacked and dried until the moisture content was reduced to the amount desirable for the nature of occupancy. It may be remarked that when handled in this manner the lumber can be better conditioned, as it need be neither too dry nor too green, thereby avoiding shrinkage and expansion when placed in the roof deck and subsequently exposed to the artificially increased humidity.

Select Grade Unnecessary

It is unnecessary—in fact, undesirable—to use long-leaf yellow pine of select grade for this treatment. Ordinary "dense" grade southern yellow pine, without sap-wood restrictions, allows of better treatment, offers sufficient strength, and is much less costly, thus offsetting in a major degree the additional cost of the preservative treatment. In the case of the Viscose plant, specifications covering the timber requirements had been completed before the decision to treat the material had been reached, and it was not expedient to change them. For future jobs, however, I feel inclined to prefer the "dense" grade to strictly heart, long-leaf yellow pine.

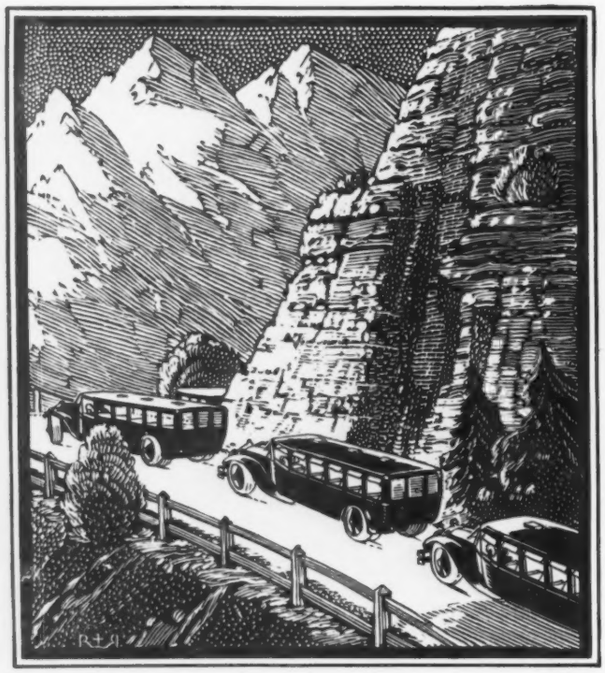
In using treated lumber it would be better if possible to have it air-seasoned before treating, thereby saving the cost of steaming and, at the same time, preventing the boiling to the surface of any pitch which may be in the lumber.

The experience here described, and the circumstances that led up to the selection of Wolmanized lumber for the roof decks of the Viscose plant will, unquestionably, be of considerable interest to many engineers specializing in textile mills, particularly, as all, without exception, have found the design and selection of the material for roof decks not only troublesome but, in numerous cases, a source of constant expense, when the wood roof decks rotted out.

Wood, properly protected against decay, which after treatment does not present disagreeable features, such as the dripping of oily or other unsuitable substances, is undoubtedly a most desirable material for roof decks under the highly humid conditions of textile mills.

* The Ballinger Co., Architects and Engineers, Philadelphia and New York.

Bought *by telephone* $360,000 worth of busses



A CHARLESTON, WEST VIRGINIA, interurban railroad needed additional new equipment, quick. It telephoned a nationally known truck and coach company in Chicago for $20,000 worth of busses. Speeding in over the same lines came a call from Montreal for new busses —$40,000 worth. Long Distance rang again and Philadelphia placed an order—to the amount of $300,000. Travel would have meant delay and expense—all used Long Distance!

THE USE OF LONG DISTANCE is rapidly on the increase. Products are being bought and sold, time and travel are being saved by long distance calls.

There is hardly any limit to the use of Long Distance. When some large order is wanted in a hurry, when travel means delay and expense. In any situation—buying, selling, negotiating—the man who goes by telephone arrives first.

He can discuss all details as in a personal interview, and he can have shipment started at once. His business doesn't have to wait. We suggest, now, that call across the state or nation that would get some important thing done. We believe you would be surprised if you knew how little the long distance call would cost. . . . . *Number, please?*

BELL LONG DISTANCE SERVICE

Cotton Stabilized on 14½c Level

Developments Depend Largely on New Crop Prospects—No Sustained Advance Probable—Yarn Prices Appear at Bottom—Cloth Prices Should Hold Strong—Stocks Are Reputed Small—Analysis of Bullish and Bearish Factors—Statistical Position Fundamentally Easy

THE prospects for the new crop are beginning to become a factor in cotton prices. Much as we have predicted, raw cotton appears to be stabilized for the time being at around 14½c for spot cotton in New York. It seems likely that fluctuations will be moderate during the next 30 days pending developments bearing on the outlook for the crop this year.

Factors of Strength in the Cotton Market

The factors which have been causing the recent strength in the cotton market may be summed up as follows:

(1) There has been a little reduction in the world crop estimate, now placed at 29,881,000 bales. This is chiefly due to a decline in the final estimate of the India crop which is placed 18% lower than last year.

(2) ***The prospects favor a lower yield per acre this year.*** Early indications are that less fertilizer will be used, and Government sources suggest greater weevil activity. These points are reinforced by the fact that it is almost universally true that a reduced yield follows a period of large crops.

(3) There has been good evidence of strong holding by the southern cooperatives and others.

(4) This holding has been helped by ease in money markets, which ease is likely to continue indefinitely.

(5) ***Consumption by the domestic mills, and exports, have continued large enough to assure that a considerable part of the surplus will be taken care of.***

(6) Foreign activity in cotton manufacturing has been large, notably in Germany and Japan, and the English industry is recovering rapidly. Spot sales in Liverpool have been large and Manchester activity has increased, partly in response to an excellent demand in India. The Japanese market has been helped by higher silver and the relatively low price of American cotton has stimulated the Indian demand for the products of the English manufacturers using American cotton.

(7) Stocks of finished goods are small, the current trade reports to that effect being borne out by the statistics published by the National Association of Cotton Finishers and by the Association of Cotton Textile Merchants.

(8) There has been a little gain in the orders for gray yardage and a large increase in the unfilled orders reported by the Association of Cotton Textile Merchants. More cotton dress goods are being cut up. The billings of finished cotton goods are lower than the orders.

(9) It is notable in the speculative markets that the new crop months are quoted relatively high, which is in contrast with the situation last year.

"Bear Points"

On the bear side of the picture are the following points:

(1) No evidence of any large reduction in acreage has yet appeared, the talk at present being of a reduction of only 10 to 12%. In spite of low prices, it is to be remembered that the cost of fertilizers, feed and machinery, is also lower, and that money is easy. Low-cost methods promise fair returns even at present prices, notably in the Southwest.

(2) Favorable weather conditions have existed thus far and it is worth remembering that moisture has been abundant, increasing the possibility of a gain in production in Texas and semi-arid sections.

(3) Spot sales in the southern markets, though still large in comparison with a year ago, have shown a declining trend. Middlemen appear to be well covered on commitments. It is doubtful if the buying of cotton would continue as active on price advances.

(4) Investment buying of cotton appears to be less active and stocks have accumulated in foreign countries where the manufacturers have been active (Germany and Japan). On the other hand, France and Italy are not consuming as much as a year ago, and while England has been gaining recently, the spinners' takings there are still less than last year at this time. It continues true that ***exports have been to a large extent going into visible stocks.*** Domestic mills have an ample supply, (Fig. 1) sufficient even at the high December rate of consumption to last for over three months. It is usual in such periods of large crops and heavy consumption, for large stocks to be accumulated, which mean less demand during the next season, thus equalizing demand and supply.

(5) Manufacturing activity in this country declined in January and a moderate recession in the cotton industry appears probable this spring.

(6) The buying of yarn continues on a hand-to-mouth basis with signs of over-production and necessity of curtailment. While some of the spinners are booked ahead, others are not, which makes a bad competitive situation. It is believed that some of the southern spinners are pushing production too far.

(7) The sales of the New York cotton jobbers and commission houses declined in January. The sales of the cotton jobbers fell much more than usual for the season and were at the lowest level for the month since 1921.

It is notable that several of the conditions affecting the cotton market, cut both ways. Thus the recent heavy buying, while it has tended to firmness up to the present time, is tending to accumulate stocks and cause an easy supply situation later on. Also easy money, while it facilitates holding cotton, also encourages production.

In this connection we note that a Government expert figures that a 10% reduction in acreage

Textile World Analyst

An analysis and forecast by Dr. Lewis H. Haney, Director, New York University, Business Research Bureau, who considers various branches of the textile industry from week to week. The conclusions reached in the Analyst are mostly forecasts and generally apply to a time two or three months ahead. The Analyst is based on statistical data and does not reflect temporary trade sentiment.

SUMMARY—COTTON

1. Cotton prices are likely to fluctuate narrowly around present levels, pending new crop developments, but no sustained advance of considerable proportions is at all probable.

2. Yarn prices are too low and are not likely to go much, if any, lower. Greater firmness is expected, but no material advance can be made until production is curtailed.

3. Stocks of cloth are small, and with demand prospects good the market should hold strong.

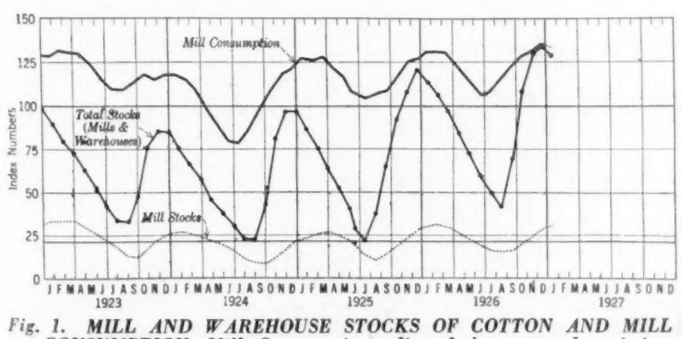

Mill Consumption
Total Stocks (Mills & Warehouses)
Mill Stocks
Index Numbers
150
125
100
75
50
25
0
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D
1923
1924
1925
1926
1927

Fig. 1. MILL AND WAREHOUSE STOCKS OF COTTON AND MILL CONSUMPTION—Mill Consumption adjusted for seasonal variation, three-months' moving average; 1921 = 100. Total Stocks on hand at end of month, consuming establishments, public storage and compresses; 1921 = 100. Mill Stocks on hand at end of month in consuming establishments; average per cent mill stocks were of total in 1921 = 100. (All of above data from the Dept. of Commerce. Figures on linters excluded.)

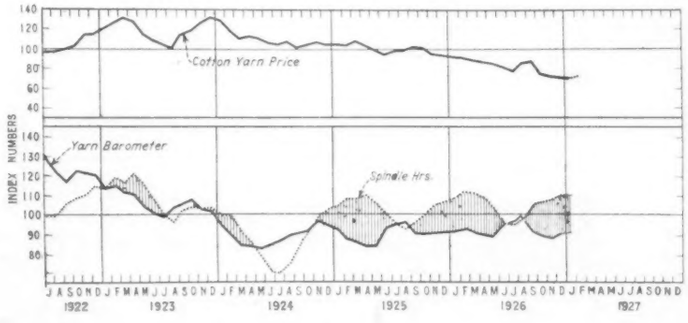


Fig. 2. COTTON YARN BAROMETER—Cotton Yarn Price—TEXTILE WORLD Index. Spindle Hours—Three-month moving average (Dept. of Commerce). Yarn Barometer—Based on orders for cotton cloth. Average of recent years = 100 for all indexes.

Sturdy Intelligent Labor—Willing and Plentiful—is Tennessee's greatest Asset!

Until recently the move from the farm has been a decidedly northern condition, but since the coming of northern industry to the south southern farmers, too, are entering the industrial field.

In the northern and eastern states the urban and country population is about evenly divided, but in Tennessee only 26% live in towns; 74% or 1,726,659 of the population are on farms. One-third of them can be easily recruited for industry.

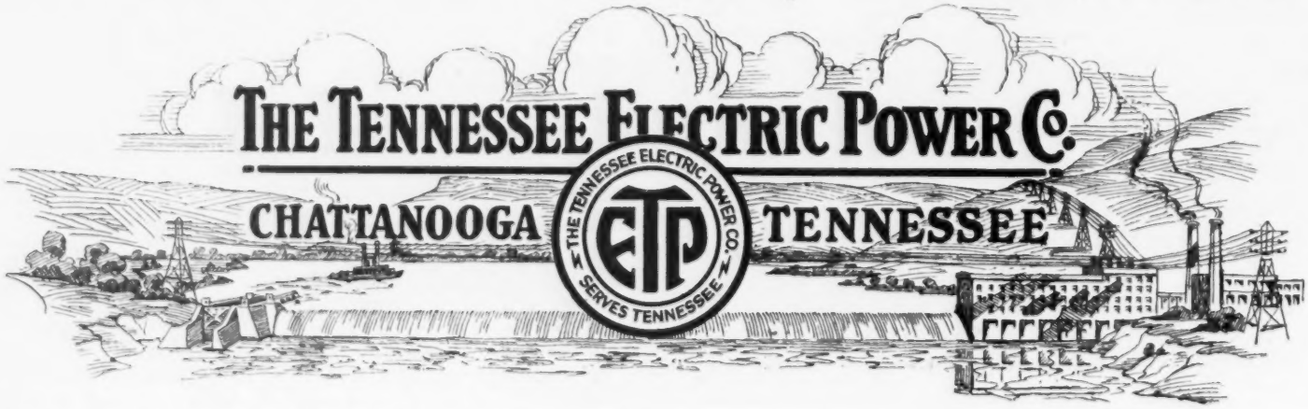
These prospective industrial recruits—men and women—comprise the same type of American stock as that responsible for the successful development of the textile industry in the Piedmont section of the South. Only 2.2% are of foreign ancestry as against 48% for the non-southern states.

Textile industries, in particular, besides finding in Tennessee direct contact with raw materials, splendid transportation and low cost of electric power, have here an almost ideal labor condition. The following data give an interesting sidelight on the possibilities for expansion of the textile industry in Tennessee. These figures show the increase in number of spindles installed per 100 white people in specific states over a period of twenty-five years.

South Carolina	255 to 588 spindles	Maine	120 to 145 spindles
Rhode Island	442 to 442 spindles	Connecticut	110 to 81 spindles
North Carolina	89 to 300 spindles	Alabama	39 to 79 spindles
New Hampshire	308 to 278 spindles	Vermont	29 to 41 spindles
Massachusetts	279 to 264 spindles	Virginia	11 to 40 spindles
Georgia	68 to 152 spindles	Tennessee	8 to 23 spindles

He'll Call at Your Convenience

The Industrial Department of The Tennessee Electric Power Company is in charge of R. C. Leonard, a native Tennessean, who from practical experience is familiar with the problems of the various classes of manufacturing enterprises now operating in the state. Much of Mr. Leonard's time is spent in northern or eastern centers on which occasions he is available for personal consultation with executives interested. Requests for specific information about Tennessee's resources, possibilities and industrial advantages or other data should be addressed to the Industrial Department of The Tennessee Electric Power Company at Chattanooga.



BUILD YOUR MILL IN TENNESSEE

with the average reduction in yield per acre that follows large crop years, would give a crop this year of 14.1 million bales. Of course, such a calculation has no particular significance except that it suggests the possibility of a good average crop, which, on top of the prospective large carry-over, would mean an easy supply situation throughout the next season.

The Statistical Position

The statistical position of cotton continues fundamentally easy. Talk of difficulty in getting cotton is not impressive: It is said that high grades are scarce, but at the same time that low grades are being widely used.

We know that on the basis of the Government crop estimate, the total supply of American cotton this year has been in round numbers 22,353,000 bales. Down to Feb. 1, the distribution was 10,123,000 bales. This leaves available for the second half of the season considerably more than half of the total supply, or 12,230,000 bales—an average of well over 2,000 bales per month, against an average of 1,186,000 bales on Feb. 1, 1925, and 1,542,000 on Feb. 1, 1926.

It seems probable that we have seen the peak of domestic cotton manufacturing activity and almost equally probable that the peak of the export movement has been passed. Judging by the showing made to date, the domestic consumption this year will run a little over 7,000,000 bales and exports a little over 10,000,000 bales, making a total possible distribution for the season of 17,250,000 bales. This would mean a carry-over of upwards of 5,100,000 bales. Even if we figure the final crop out-turn at 18,000,000 bales, the carry-over will be around 4,500,000.

With no present prospect of a new crop of under 14,000,000 bales, it is thus reasonable to conclude that no further sustained advance in raw cotton is probable and that the market is likely to be a two-sided one, and rather stable, with only narrow fluctuations until tangible evidence concerning the new crop develops. The chief factors will be the progress of the crop and the general business situation affecting consumption. As yet there is no evidence that any sharp reduction in the crop is probable and the business prospect is highly uncertain, with the present trend moderately downward.

The Outlook for Yarn

The yarn markets, as forecast last month, have continued weak during December and January. The TEXTILE WORLD index (on the basis of the average for 1921-25 as 100) is as follows: November 73.5, December 72.4, January 71.8. In February there was a little recovery, our preliminary estimate for the month being 72.9. This recovery reflects a rise in our yarn barometer since October. The barometer is still low and irregular and an excess of spindle activity is still indicated. The spindle excess, however, is not so much as it was, for, considering the season, spindle activity showed a downward trend in January.

Judging by the statistical indications of demand and supply, cotton yarn should be selling on as favorable a basis with reference to raw cotton as it did in January, 1926, or February, 1925. In these months there was an average spread of between 21 and 22c. To allow such a spread now it would be necessary for yarns to average about 36c a pound, against an actual February average of less than 33c. Thus the present spinners' margins are very unsatisfactory.

Taking everything into consideration, it seems that the bottom of the yarn market is near, if it has not already been seen. Assuming that raw cotton will continue fairly stable, greater firmness in yarn prices is probable. No material advance is yet indicated, however, as the demand for cotton goods can not, after all, be called really large, while spindle activity although considerably down from the September peak, is still somewhat greater than the indicated demand (Fig. 2). Yarn buyers are operating from hand-to-mouth and the knitting yarn business has not been good.

Sustained Strength in Gray Goods

Gray goods prices have been stable and firm during the second half of February, with some counts averaging higher than in January, while others remain practically unchanged. Finished cotton goods data for January show an increase in orders that was a little greater than usual while billings declined. Shipments gained about as usual for the period; stocks are low and much under the level of a year ago.

We would emphasize the gain in orders for finished goods as compared with billings. In the past this has proved a good barometer. The trend is not sufficiently pronounced to indicate much, if any, increase in the price of finished goods, but it is in the right direction and is sufficient to warrant the opinion that the present strength will be sustained.

Conveying Jack Spools

Spools of Woolen Roping Carried by Gravity from Card Room to Spinning Room

WHEN the present carding, spinning, and picking building of the Miami Woolen Mills (Shuler & Benninghofen) was erected at Hamilton, O., it was necessary to solve a problem of spool conveying. The picker room was on the first floor; the carding room, on the top floor; and the spinning room, on the second floor. There was no problem to be considered in conveying the raw stock to the third floor, since this had always been done by means of blowers.

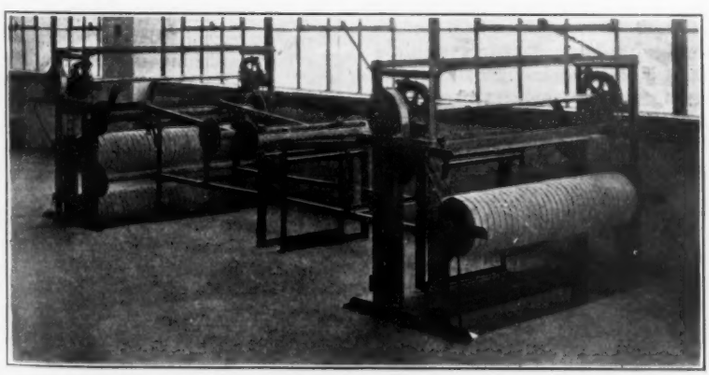


Fig. 1. Tops of Conveyors Where Full Spools Are Loaded on and Empty Spools Are Automatically Taken Off

The carding and spinning, however, had always been on the same floor, and the conveying of the spools from the card room to the spinning room had been accomplished by simply moving them along on movable racks. They might, of course, have continued this same idea by installing an elevator and conveying the spools in the same manner as formerly; but this would not have been thoroughly satisfactory since the elevators, which it would have been necessary to house in fireproof shafts, would have taken up a rather large share of the center of the room.

Gravity Conveyor

To meet these requirements, the Haslett Chute & Conveyor Co., Oaks, Pa., supplied the equipment shown in the accompanying photographs. This consists of endless chains which carry the full spools of roping from the card room down to the spinning room on the floor below, and carry the empty spools back to the card room. The spools are kept separate from each other in handling, to avoid chafing, which would damage the material. Fig. 1 shows two of the conveyors above the floor in the card room. Fig. 2 is a view underneath in the spinning room. The work of this mill is mostly very heavy. One card generally has all it can do to take care of a single mule.

The operation is as follows: At the top, the filled spool is put by hand into a holder, where it is held until the revolution of the machine causes it to be picked up by carrier links on the chains at either end of the spool. The machine is kept loaded full at all times so that the excess weight of the full spool going down is sufficient to carry the freshly inserted spool up over the top of the machine and also to carry up the empty spools which are placed by hand at the bottom on the up-side. The filled spools automatically drop off at the bottom on a storage rack, as do also the empty spools at the top.

The machine is not in continuous operation, but each time a filled spool is put on at the top the operator gives the operating lever a pull, which releases a catch and permits the sprocket wheels to make one revolution. The band brake on the top sprocket wheel shaft reduces the shock of the machine when it is stopped at the completion of the revolution.

A hand crank will be noted at the bottom, by which the machine may be operated, if, through the unequal supply of material, there is not sufficient load on the down-side to make it self-acting.

Fig. 2. Full Spools Descending to the Spinning Room and Empty Spools Rising Toward the Card Room

The mill states that this gravity arrangement is very simple and works without any trouble whatever.

GREENWICH, N. Y. The Dunbarton Mill of the Barbour Flax Spinning Co. is again running on full time weekly schedules with an enlarged force.

NEW MACHINERY AND PROCESSES

Improved Electric Drive

For Combination Doubler and Twister for Silk

*By C. T. Guildford**

The usual method of driving the combination doubler and twister or so-called Style 5-B spinner of the Atwood Machine Co. is by the use of a horizontal motor mounted on the end of the frame and driving by chain to the standard crosshead drive for this machine. The horizontal motor and chain drive simply take the place of the vertical belt drive from the line-shafting above.

The new method of drive developed by the Westinghouse Electric and Mfg. Co. substitutes for the horizontal motor a vertical ball-bearing motor mounted on the end stand. Instead of driving by chain to the cross-head shaft, it drives direct on to the spindle belt from a pulley on a lower shaft extension. An upper shaft extension of this motor drives the feed rolls direct through spiral gears. The drive is shown in Fig. 1.

The control for the motor consists of a switch which will operate either forward or reverse.

With this drive the cross-head shaft with its idlers and quarter-turn spindle belt and additional belt or chain drive to the feed rolls are eliminated. This results in a saving in power, a saving in the length of spindle belt required, and practically an elimination of slip, both on the spindle belt driving pulley and on the feed-roll drive where a belt is often used.

The motor is of the ball-bearing type with grease lubrication so that no oil is present to drip on to the spindle belt and thus cause slip. It is self-contained within the frame and takes up the same aisle space as the cross-head shaft drive, but the number of parts of the drive are reduced to a minimum.

The twist obtained with this drive is about as perfect as can be obtained with a spindle driven by belt. This is because the feed rolls are driven through a positive gear drive from the same motor shaft which drives the spindle belt, and in addition because the slip on the spindle belt pulley is reduced to a minimum by the use of a paper or cork insert pulley. The speeds then of the spindles and the feed rolls are maintained with an absolutely constant ratio during the entire process of spinning, thus giving very uniform twist.

Right and Left-Hand Twist

To change from right to left-hand twist, or vice versa, it is only necessary to replace the spiral gear pinion on the upper shaft extension of the motor with one of the opposite hand

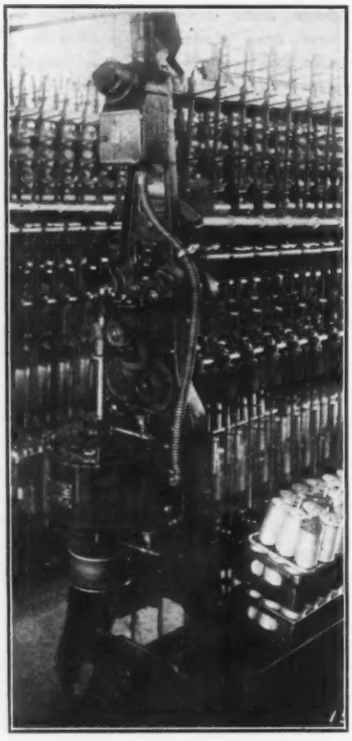


Fig. 1. Combination of Doubler and Twister for Silk Driven by Vertical Ball-Bearing Motor Direct to Spindle Belt

and set the motor switch to operate on reverse. In this case the motor runs the spindles in the reverse direction but continues to run the feed rolls in the same direction as formerly.

The machine shown in Fig. 1 is one of a group of 39 so driven with specifications as follows: spindle whirl, 13/16"; speed of spindle, 5000 r.p.m.; diameter of spindle belt pulley, 5"; pulley material, iron with cork inserts. A paper pulley may be used with excellent results. These machines were used as doublers only on 1½ turns per inch.

Test Results

Fig. 2 is a power curve taken on a test of 5-B machine with 104 spindles operating at 5500 r.p.m. on three-thread organzine with three turns. The machine was driven by a 1½ h.p. motor with a starting torque approximately the same as that required by the machine as determined by lever arm test. The starting was quickly accomplished in easy fashion and with no extra ends down.

A study of the curve shows that this full speed was attained in less than 5 seconds and that the starting power was of very short duration, being represented only by a single line swing of the meter needle.

Further study of the curve at the right where the chart is traveling at the rate of one inch in 5 minutes, shows the variation in power as the ring rail moves up and down to give the wind on the bobbin. The maximum power represented is 1.37 and the minimum 1.32 horsepower.

The balance of the curve where the chart is traveling at the rate of 12 in. per minute shows the minimum power with the ring rail down somewhat extended in length so as to bring out the slight variations in power at this position of the ring rail. The left-hand end of the curve shows the slight variations in power when the ring rail is in the tap position.

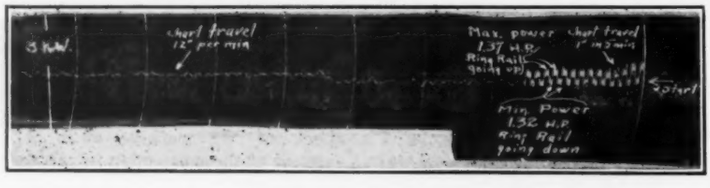

3 KW.
Chart travel 12" per min
Max. power 1.37 H.P. Ring Rail going up
Chart travel 1" in 5 min
Spiral
Min. Power 1.32 H.P. Ring Rail going down

Fig. 2. Power Test Curve Taken on a Motor-Driven Combination Doubler and Twister for Silk

Nitruated Steel

Special Steel Surface-Hardened by New Process

The Ludlum Steel Co., Watervliet, N. Y., has secured the exclusive manufacturing and sales rights of "Nitralloy," a special steel capable of being processed easily and subsequently treated to obtain an extremely hard surface. Nitralloy steel was first produced in the Krupp Works, Essen, Germany, and has found extensive use on the Continent for various machine parts where a very hard surface is required.

The nitralloy steel is of a special analysis, and its physical properties may be developed at ordinary steel working temperatures. The part for which it is intended is first made by forging, rolling, stamping, or drawing. Machining and grinding to exact dimensions are next carried out, and the part is polished if desired. The part is then hardened by the special process called nitruation.

Nitruation consists of heating the finished nitralloy part in a furnace to about 950 deg. F., and subjecting it at this temperature to the action of ammonia gas for a given length of time, after which the part is removed from the furnace and allowed to cool in the air. The length of time which the steel is left in the furnace exposed to the ammonia fumes governs the depth to which the hardness extends into the steel.

It is claimed that the treated steel will withstand a temperature of 900 deg. F., without losing its surface hardness; and that there will be no distortion, warping, or alteration of size or shape in the hardening process, because of the low temperature at which hardening is done. This obviates any necessity for truing-up after the hardening treatment. Even the polish put on the metal before hardening remains bright, with but a slight and easily removable gray, yellow, or violet coloration.

The hardness of the steel is not definitely measurable by any testing equipment in use at present. Attempts have been made to measure the hardness by the scratch method. The results, when converted, indicate a Brinell of 800-900. Sharp corners will easily cut glass and even scratch quartz, which would indicate a hardness of 7 against 10 for the diamond. Therefore, Scleroscope, Rockwell, and Brinell testers do not interpret accurately the hardness present, so research is being carried out to find some means of determining the absolute hardness of nitruated nitralloy steel.

Among the advantages claimed for this product are the following: All machining, grinding, and polishing are done before hardening so that there is no grinding away of hardened portions of the part to make it conform with specifications, hence there is no loss of hardened surface. The low temperature at which hardening is done does not affect the physical properties of the steel obtained at higher temperatures, except at the surface where the ammonia gas comes into contact with the steel, where extreme hardness is obtained. The low hardening temperature also makes for low furnace maintenance and operating costs.

A consideration of applications of nitralloy steel to the textile industry would seem to recommend the investigation of the following: cams, camshafts, gears, worms, pinions, thread guides, spindles, flyers, spinning rings, and heddles.

RECENT TEXTILE PATENTS

BRAIDING and like machines, Stop mechanism for motion. 1,617,795. C. A. Dame, Providence, R. I.

BRAIDING reinforced cords, Method and apparatus for. 1,617,983. S. A. Beyland and E. P. Reynolds, Rochester, N. Y. Assignors to The Stromberg-Carlson Telephone Manufacturing Co., Rochester, N. Y.

DYESTUFFS and making same. 1,617,872. F. Straut and H. Schneider, Riehen, Switzerland. Assignors to Society of Chemical Industry in Basel, Basel, Switzerland.

(*Continued on page 95*)

*General Engineer, Westinghouse Electric & Mfg. Co.

QUESTIONS AND ANSWERS

CORRESPONDENCE WITH READERS

Under this head, we undertake to answer, free of charge, to the best of our ability, questions pertaining to textile matters received from any regular subscriber to TEXTILE WORLD. Inquiries should give the fullest information and data possible. In the case of damage to material, a sample should be sent. In this way answers can be given which will be of immediate technical value to the correspondent and to others in the same line. Inquiries pertaining to textile processes, machinery improvements, methods of management, the markets, etc., are especially invited as well as any legitimate discussion on the views expressed. All inquiries must be accompanied by the name of the person inquiring, not for publication, but as an evidence of good faith. The identity of those seeking information on technical subjects will not be disclosed.

If the question is not of general interest to textile readers and involves expensive investigation, a charge covering the cost may be made, of which the inquirer will be advised before any expense is incurred.

Letters expressing opinions or voicing criticism will be signed by the correspondent's name unless the letter itself contains a request that the name be withheld.—EDITOR.

Manufacture of Oval Rugs

Technical Editor:

If you can furnish us with any information as to the type of loom employed in the manufacture of oval-shaped rugs, and also the method used in their manufacture, we would be exceedingly grateful to you. We are fairly well acquainted with the methods used in the manufacture of rectangular rugs, but we see the possibilities of developing a trade in the oval-shaped rugs, and consequently this information is desired. (6038)

In general it may be said that no special type of loom is employed to manufacture oval rugs, but various regular types of looms are used for this purpose. Of recent years there has been quite a vogue for oval rugs. This fashion was originally set by certain of the Wilton manufacturers. For their particular process the oval rugs are woven on their regular types of looms, and the jacquard cards are cut so as to bring up the ends to form an oval design. Naturally the balance of the cloth woven is merely in the nature of backing and is made up of the cotton warp and filling, with the wool or worsted working as dead in the back. The woven product is cut from the loom just the same as any other strip of carpet would be cut. The surplus backing is cut off in the finishing room and the edges of the rug are bound and in some cases finished with a long or short fringe, according to the taste of the manufacturer.

As far as velvet oval rugs are concerned, these are printed in the manner usual to the printing of all velvet rugs, excepting that the design is confined to oval or circular shapes. The surplus material is cut off and the binding and fringing is carried out in the same manner as in the case of the Wilton rugs.

In the case of chenille oval rugs, the same type of loom is employed to weave chenille ovals as would be used for the weaving of rectangular pieces, the only difference being that the chenille fur is set in the loom in an oval or circular shape, rather than being set to cover the entire surface of the carpet. In a general way, it may be said that the manufacture of oval rugs lies more in the finishing than in the weaving.

* * *

Defects in Rayon Stocking

Technical Editor:

We are sending you a stocking made of pure rayon for the purpose of having you tell us what causes the torn or jagged appearance. We have made investigations through our plant for the purpose of trying to ascertain what causes the jagged appearance in the stocking. At first we thought it was caused by defective yarns, then later we worked on the supposition that it was the dyeing machine that caused it. We are at a loss to know just what causes this appearance, and we would be pleased to have you advise us how we can remedy the defects as shown in this stocking. (6042)

After a close study of the stocking as received it was wet out and immediately dried on a steam-heated form. This treatment improved the appearance, although a few small areas of the original trouble remained. It may be that these stockings were partially dried before boarding, and so were inclined to be rough in the prematurely dried spots. If there is a long period between the time the stockings are taken from the dyehouse and the time when they are boarded, it may help the inquirer to arrange these operations so that boarding will take place before the stockings have had time to partially dry out.

In connection with the trouble that was apparent after reboarding, it is difficult to suggest positive remedies. This trouble is very common now, probably due to making lightweight stockings on machines designed for and most suitable for coarser yarns. The suggested remedy for the trouble is oiling the yarn in the most uniform method possible, and employing methods to prevent drying out.

A dyer replies to this question as follows: In my opinion the torn or jagged appearance is not caused in the dyehouse unless the stockings were dyed loose. Such goods should always be dyed in sacks.

* * *

Manufacturing Braided Shoe Laces

Technical Editor:

Kindly give information covering the following questions: What kinds or makes of braiding machines are used in braiding flat and round shoe laces? What grades, plies, and sizes of yarns are mostly used? What are the number of twists and the construction of yarns? What form or put-up is required by the machines? What data have you available as to the number of yards of braided shoe lace of a definite width that can be obtained from a given number of pounds of yarn? What kind of tipping machine is used? Is yarn generally dyed and then braided, or is yarn usually braided natural and then the braided shoe lace dyed? What are the costs of manufacture covering any general type of shoe lace? Having asked perhaps quite a few questions, I will certainly appreciate whatever full and complete information you can give; also any other information as to any other equipment which is necessary for the manufacture of shoe laces. (5999)

There are several makes of braiding machines suitable for the manufacture of flat or round shoe laces on the market. Names of builders have been sent to the inquirer. There are a number of different sizes in each make. For instance, one company's machines are listed as 16s, 24s, 32s, 44s, 48s, 64s, and 72s. These sizes correspond to the number of carriers or bobbins to be run on the machine. The size of the machines required will depend to a large extent on the quality and texture of the desired laces.

The yarn used depends upon the quality of the shoe lace desired. Shoe laces are made in a wide variety of qualities. The yarn sizes most commonly used are as follows: 16/1, 20/1, 26/2, 30/2, 36/2, 40/2, 50/2. The yarns may be plain cotton, mercerized, or glazed. They may be used one, two, or three ends on a single bobbin. Yarns must be spooled on the special bobbins that are required by the make of the braider used. The different sizes of machines of one make usually take the same kind and size of braider bobbins, and so the bobbins are interchangeable.

Width in braid is a very indefinite term; so much depends upon the elasticity of the texture, the tension under which the material is held, and the size and finish of the yarn. However, the weight of the braided material should not be less than 98% of the weight of the raw material; not more than 2% being allowed for waste and shrinkage. On large orders, this allowance may be reduced to a fraction of 1%. Given the weight in grains of a shoe lace, tips removed, it is a simple problem in arithmetic to determine the number of yards of braid per pound of raw material.

Tipping machines also are made in a number of different styles, and it would be well to compare the specifications of manufacturers whose names we have sent to the inquirer.

The method of dyeing is a matter of opinion. Each method has its advantages and its drawbacks. Much depends on the size of the orders. Small orders for special colors are probably best made in the gray and dyed after braiding. This method eliminates the small amounts of colored yarn that are bound to be left over on each order for special color.

The subject of costs is a very broad question. Many factors enter into it, besides the general and quite natural disinclination of business houses to divulge their private business. Much depends on the size of the plant; whether the floor space is owned or rented; the proximity and quality of the available labor; the efficiency of those in charge; the policies of the concern, etc.

The following paragraphs deal with equipment other than that previously mentioned: Spooling machines will be necessary to convert the yarn from tubes to braider bobbins. A skeining machine will be needed to put the braid in proper shape for the dyer. Some arrangement will be necessary to convert the dyed braid from skeins to a form suitable for cutting. If any of the material is to be dyed before braiding, a skein winder will be necessary to spool the dyed yarn. Information concerning any of these machines may be obtained from textile machinery concerns.

An automatic cutting machine is made by the Artos Engineering Co., Milwaukee, Wis. This machine can be set to cut any desired length and once adjusted requires very little attention. In estimating power required, it is safe to figure a 5 h.p. motor for the operation of 2,000 carriers.

* * *

TEXTILE WORLD,
New York City.

Attention—Mr. H. O. Barnes.

Gentlemen.—We have your letters of the 23rd and 24th, giving us the information for which we asked in regard to the manufacture of ——————. We wish to thank you very much for the courtesy shown, and for the list which you have sent us. We want to compliment you on your service along these lines, as it is a great help to the manufacturer.

Again thanking you for the information, we beg to remain

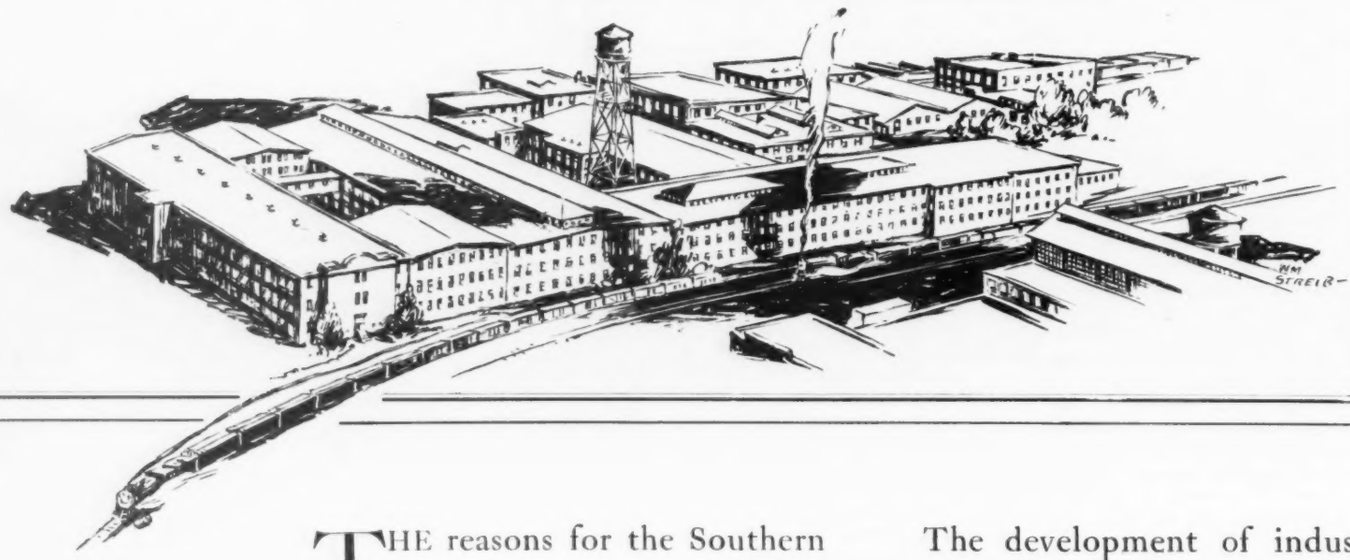
Yours very truly,
LEONARD W. WOOD SILK Co., INC.
(Signed) L. P. Wood

Stickers and Shires in Silk Weaving

Technical Editor:

What causes stickers in weaving 20/22 silk crepe de chine. There are two warpers working on the same warping machine; one warper's work has no stickers and the other warper

What are Georgia's Unusual Advantages for Textile Mill Location?



Has Your Present Location These Assets?

Low production cost
Plentiful and adaptable labor
Low cost, dependable Power
Low building costs
Low taxes
Tax exemptions
Community cooperation
Growing market for product
Adequate railroad facilities
Modern port facilities
Mild climate

THE reasons for the Southern flow of the textile industry are well known. But what are the factors which have, within the past few years, concentrated the attention on Georgia?

Power at low rates to meet any demand, low taxes, tax exemptions, good water, excellent transportation—these items are important, of course. But the big reason Georgia has been selected for the largest recent developments has been the particularly favorable labor situation: A thoroughly adequate supply.

The development of industry in Georgia has not begun to draw from the reserve supply of labor. Intelligent, willing, adaptable, loyal Anglo-Saxon workers are plentiful, and ready to step into your organization.

We should like the privilege of pointing out in detail, in dollars and cents, why profits reach their highest point in Georgia. Georgia Power Company, Atlanta, Ga., New York Office, 120 Broadway.

GEORGIA POWER COMPANY

Correspondence with Readers—Continued

has stickers. Kindly let me know what causes shires on 6-shaft satin. There are 15,000 ends, 92 picks, 3-thread Japan filling. When filling runs out of shuttle the loom stops 1½ in. before front center; that is, the reed would be 1½ in. in front of the last pick. Vibration of the floor causes the loom to rock. Would that cause shires? (6028)

The fact that two warpers working on the same frame turn out different grades of work would lead to the conclusion that the machine itself is mechanically perfect and that the stickers are caused by the workmanship of the operator. A warp of 15,000 ends is quite a heavy warp, and it is of the utmost necessity that a warper be very careful in making a heavy single end warp of this construction.

Stickers are often caused by the creel being too far off center; also by improper reeding and by the spread cords cramming the section too close as it leaves the last roller. They are also caused by the warper not running with an open cross. It is further of the utmost importance that the warper, in running with an open cross, makes sure that it is not put in so that it is bucking the last cross. Plenty of tension should be used in beaming and sufficient paper used. Extreme care must be used not to overlap sections.

Shires may be caused by poor friction ropes or loose lay. Looms should further be checked to see that picking and shedding are as even as possible. Vibration of the loom is very apt to cause shires. At best, the above weave is a wild satin and cannot be made to lift absolutely even, and it often shows very unevenly on the back. The inquirer states that the loom stops an inch and a half in front of the last pick. He no doubt means that it stops an inch and a half before dead center, in back of the last pick. The brake bands on the loom should be tightened up to the greatest possible degree without the loom binding, and the loom should stop if possible at the last pick at fell of cloth, before turning over. On the older type of loom this is a very difficult task, and it is one of the reasons that so many weighted crepes in the market today show these stop marks.

* * *

Cross Streaks in Crepe Satin

Technical Editor:

We are enclosing a sample of satin and would ask what in your opinion is the cause of the cross streaks in the filling. Is it uneven twist, uneven silk, something in the tinting which does not take the dye, or is it something else? We would like to go to the bottom of this. (6045)

The sample of crepe satin submitted is quite a heavy construction in pure dye. The bars mentioned are hardly perceptible in a short piece such as was submitted, but careful examination shows them very faintly. This defect is prevalent today in a greater or lesser degree on all constructions of this character. Holding the sample to the light shows a distinct unevenness in the filling itself, which it is almost impossible to eliminate completely. It does not look as if these bars are due to faulty weaving, nor can they be attributed to the rope tension.

* * *

Interested in American Textiles

AMSTERDAM, HOLLAND

Editor, TEXTILE WORLD:

Having been large importers of hosiery and underwear from the United States, we have recently considered the importation of all kinds of piece goods made in the U. S. A.

As far as we know there is no important manufacturer who is represented in our market. We have found in the past that European merchandise was cheaper than that offered by American manufacturers.

Conditions have changed, however, with raw materials cheaper in the United States than in Europe. Therefore we feel American manufacturers are in better shape to secure business in this market than European.

We suppose that American piece goods manufacturers are willing to consider the export of their product to European countries. We should be pleased therefore if you would put us in touch with first class, well equipped manufacturers who are willing to export their products and put their interests in our hands.

(D 169)

* * *

Reason for Rayon-Filled Fabric Lacking Luster

Technical Editor:

I am enclosing two swatches of a summer suiting which are marked A and B. The yarn pasted above each swatch is the filling used in that swatch. It is cotton veneered with rayon. Five turns per inch are used. Will you please tell me, if possible, why swatch B has so much more luster and such a better handle than swatch A? The rayon in A seems to be dead and flat, while in B it seems to have a lot more life and pep, and also looks a lot better. Any information which you can give me will be greatly appreciated. (6036)

Swatch A counts 46 x 44, 2/20s warp; swatch B counts 41 x 40, 2/20s warp. The same kind of warp and filling are used in both swatches. The distribution of warp and filling in A and B is equal; that is, there is as much warp on the face of both cloths as there is on the back.

The heavier sley in swatch A is one of the reasons for the lack-luster appearance of the rayon, but the real reason is the weave. It is a set weave; that is, the warp and filling cuts on every pick or at every intersection of the warp with the filling.

This type of weave has a tendency to bind the rayon filling in too tightly, preventing the filaments of the rayon from spreading out or curling up. Swatch B, while having the same distribution of ends and picks on the face and back as swatch A, is of a lower sley and pick. This makes the cloth more open in character. But it is really the weave that makes the difference in luster.

In swatch B the warp ends do not cut with the filling on every pick. On every pick the filling floats are allowed to slide into each other. This permits the picks of rayon to come together on every other end as well as pick, and the nature of the weave is such that the picks are given a slight curl where the two rayon picks are permitted to come together.

A good way to prove this is to introduce the weave that is used in swatch B into swatch A. While there will be a slight difference owing to the higher sley of swatch A, this will prove that it is the weave and not the warp or filling that is responsible for the lack-luster appearance of swatch A.

* * *

Slugs in Cotton Yarn

Technical Editor:

I am sending you a sample of leather from my roller; also sample of yarn I am making which contains slugs. The rolls are good and are finished with a good gloss, but the trouble is that waste comes over the roll and gets into the yarn making slugs in the yarn. This makes it hard for the spinners, also spoolers. I would like any kind of advice to stop the waste from coming down through the yarn. I have on my clearer board the regular clearer cloth. I have been running those rolls for two weeks and they are still the same as the first day they were on. (6044)

We cannot see any fault with the roller leather. Judging by the sample of yarn sent, the trouble is undoubtedly caused by spinners not keeping their clearer boards picked. The yarn shows that the waste or slugs is clearer waste, and is loose on the thread. If you will require your spinners to pick systematically their clearer boards, say three times each day, this trouble will disappear. The drawing frames, slubbers, intermediates, and speeders will also need the same attention.

* * *

Gum Spots on Silk and Rayon Hosiery

Technical Editor:

We would appreciate any information you may be able to offer us with the object of solving the following problem: In the dyeing of a hose made of 150 denier rayon plaited with 3-thread tram, we find that in the boil-off some small balls of gum attach themselves to the hose. We do not understand why the gum does not remain in solution, and wonder if it is due to the excessive quantity of magnesium salts that our water contains. If this is the case, is there any way in which we can overcome the difficulty? And in what manner can these particles be removed once they have imbedded themselves in the hose? (6040)

Any appreciable amount of magnesium or calcium salts in water used for boiling-off silk may cause the spots complained of. This is due to the insoluble calcium or magnesium soap formed with the boil-off medium. The best cure for this difficulty is, of course, the installation of a water softening plant.

ARE you looking for a mill? A large silk organization wanted to establish a branch mill. They turned to Textile World's Clearing House—using this ad:

Wanted—Modern Silk Throwing Plant equipped with modern Atwood Machinery to throw at least 1,000 lbs. weekly of crepe. Pennsylvania or Southern location preferred. Address Adv. —, Textile World.

Eight replies were received. What did they think? "We were very much satisfied with the results." Mill-bent? —Use the Clearing House for *results*. (See pages 152 to 155 this issue.)

RECENT TEXTILE PATENTS

(*Continued from page* 90)

HUMIDITY controlling units, Attachment for. 1,617,885. J. Whiting, Boston, Mass.

LOOM. 1,618,104. J. Northrop, Hopedale, Mass. Assignor to Hopedale Manufacturing Co., Milford, Mass.

LOOMS, Shedding and shuttle actuating mechanism for. 1,617,388. J. E. Grosvenor and W. T. Picking, Kidderminster, England.

LOOMS, Stationary yarn guide for weaving. 1,617,347. F. Phily, Pau, France.

SLITTING and winding machine. 1,617,572. J. A. Cameron, Brooklyn, N. Y. Assignor to Cameron Machine Co., Brooklyn, N. Y.

STRANDS, Method of and apparatus for determining the pliability of. 1,617,938. G. A. Bouvier, Oak Park, Ill. Assignor to Western Electric Co., Inc., New York.

THREADS, Manufacture and treatment of. 1,617,544. F. Rosenthal, New York, N. Y.

FABRIC with patterns printed thereon. 1,616,080. J. R. Freedman, New York, N. Y.

FESTOONING rack. 1,616,363. J. R. Gammeter, Akron, Ohio. Assignor to The B. F. Goodrich Co., New York.

GEAR for looms, Crank-shaft. 1,616,406. W. H. Bahn, Greenville, S. C.

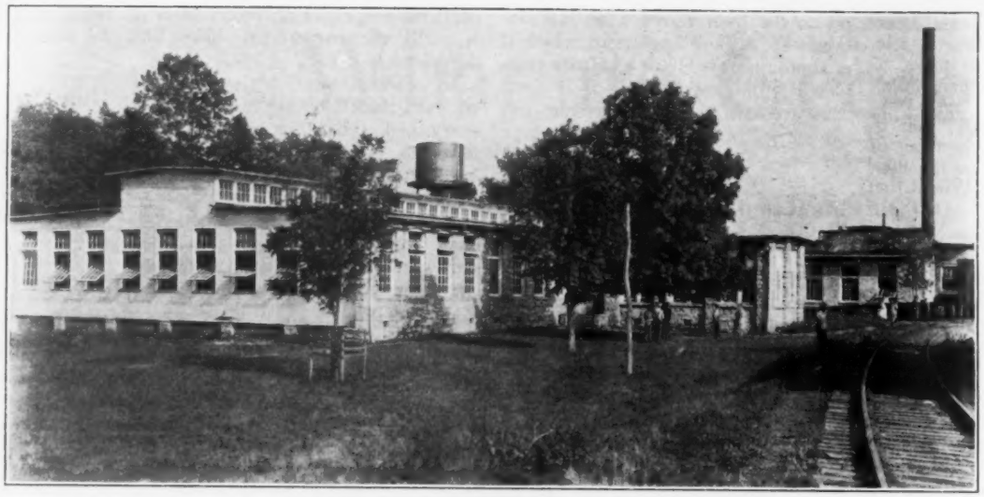
SPINNING frames, Means for leveling and lining. 1,616,084. A. M. Guillet, Charlotte, N. C.

SPINNING machines, Twist tube for use in ring. 1,616,015. J. E. Wenzel, Aue, Germany. Assignor to Firma Ernest Gessner Aktiengesellshaft, Aue, Germany.

STOCKING top. 1,616,003. A. E. Sanborn, Laconia, N. H.

TEXTILE articles, Packaging. 1,616,181. J. R. Freedman, New York. Assignor to Frandor Manufacturing Co., Inc., New York.

TOP roll and covering same. 1,616,108. H. S. Bristol, Newport, R. I.



STEVENSON COTTON MILLS, STEVENSON, ALA.

Every City and Town a "Community" in SOUTHERN CITIES—

The textile trend nowadays is away from the big cities and towns. Mill men appreciate the advantages of locating in a "community" rather than amidst the varied interests of the teeming city or town.

In SOUTHERN CITIES the "community" spirit rules because the 85 cities and towns comprising this grouping are all small. Industry benefits. *Teamwork* is a reality.

The workers are industrious, loyal and satisfied. They consider themselves an integral part of any industrial enterprise and *act* it. The representative citizens are eager and willing to help potential industries get off to a good start—and can be depended to do their part in keeping the ball rolling. Incidentally, the labor is practically all native-born, descendants of Anglo-Saxon or Scotch Irish.

But more than a warm welcome and satisfied labor await you in SOUTHERN CITIES. Mill men can find here the ingredients that make for textile success. Cotton and coal are nearby. Power is cheap and unfailing. SOUTHERN CITIES occupy a 11,000 sq. mile area in the very heart of the south—in the very center of things as far as markets are concerned. The climate—Tennessee's and Alabama's—healthful, conducive to industry the year around.

Investigate the undoubted possibilities of SOUTHERN CITIES. An alert "Community" organization—SOUTHERN CITIES Associated—is ready to serve you—to assist the prospective mill man in every way possible. *Write.*

SOUTHERN CITIES UTILITIES COMPANY

Chattanooga ····· Tennessee

MILL NEWS

COTTON

New Construction and Additions

ALEXANDER CITY, ALA. The Russell Mfg. Co., which has recently installed over 300 looms for the production of pajama checks, has purchased 650 additional looms and expects to have them in operation by fall on a complete line of plain and fancy shirtings.

*CEDARTOWN, GA. The Goodyear Clearwater Mills, Inc., began production last week. Operations will be increased steadily until maximum output is reached.

*GAINESVILLE, GA. The Gainesville Cotton Mills have awarded contract to Smith & Williams, Atlanta, for construction of a five-story addition to their plant. Lockwood, Greene & Co., Atlanta, Ga., are the engineers in charge.

*GAINESVILLE, GA. Johnson & Johnson have placed their humidifying order with the American Moistening Co. to equip their mills here with Duplex humidifiers and Anco humidity controls.

ELLENBORO, N. C. It is announced that the plant of the Ellenboro Cotton Mills will start operations shortly. The plant was completed last summer but never started operations due to conditions in the cotton manufacturing business. A 30 x 75 ft. slasher room is to be added and two tanks having a capacity of 50,000 gallons are now being erected.

*KANNAPOLIS, N. C. The installation of humidifying and ventilating equipment in the new addition to the plant of the Cannon Mfg. Co., will soon be completed.

WINSTON-SALEM, N. C. The Arista Mills Co. has awarded a contract for the erection of 35 dwellings at a cost of $40,000.

NASHVILLE, TENN. The Morgan & Hamilton Co. are installing eight new cards, new speeders, picking and drawing machinery. They have replaced all old looms with new ones. The mill is operating on full time schedules, day and night.

Fact and Gossip

*SCOTTSBORO, ALA. It is reported that $70,000 of the necessary $100,000 stock has been subscribed for the establishment of a cotton mill at Scottsboro and it is predicted that the full amount will be taken within a few days. The city is making concessions in taxes, and free water and a free site for the proposed mill have been offered.

CORCORAN, CAL. The first cotton mill for the San Joaquin Valley of California, is in prospect of establishment at Corcoran in the near future, according to J. W. Guiberson, prominent cotton grower of Corcoran. A group of San Francisco capitalists, he asserted, whose names are not yet to be made public, have agreed to finance the building and equipment of a plant to cost about $200,000. An option on property for a site has already been secured. Local cotton growers are to be asked to help the enterprise by turning in a bale of cotton or more for stock. Present plans indicate that when operated at capacity it will consume 2,000 bales of cotton a year on the production of cord tire fabrics.

ATLANTA, GA. In accordance with recommendations by the Committee on Appropriations, the United States Senate and House of Representatives, Washington, D. C., are considering a fund of $14,000, for the construction of a one-story addition to the textile mill at the local Federal penitentiary.

ADAMS, MASS. Several changes were made in the officers in addition to the election of four new directors at a meeting of the stockholders of the Renfrew Mfg. Co. held on Feb. 24. The officers elected are: President, Donald M. Hill, Boston; vice-president, Carl T. Tourtellot, works manager; treasurer, Ira S. Ball, succeeding Allan M. Perkins; assistant treasurer, Charles A. Mies, Concord, N. H.; clerk, Lawrence Lombard; directors, R. E. Noble, Adams, Calvin Austin, Donald M. Hill, Spencer R. Hill and Henry C. Wiley, all of Boston, Edwin K. McPeck and Harry G. Sheldon, both of Adams, Robert L. Whipple, Worcester, Mass., and William C. Peyerson, New York, the four latter being additions to the board. Authority was given the directors to sell and dispose of any or all property of the company as they might find necessary or advisable. Officials expressed a hope that the business can be refinanced. John P. Maguire, president of the Textile Banking Co., New York, was appointed agent to carry out the sale of the property. A final decision as to the future of the company depends upon the results of a survey now being conducted.

ADAMS, MASS. The stone mill on Grove St., formerly operated by the Renfrew Mfg. Co. has been offered for a period of from 5 to 10 years, free of charge, to any new industry that may locate there. It is a four-story structure and one of the oldest mills in Adams.

CLINTON, MASS. The five-story Cameron St. mill of the Lancaster Mills, which has been idle for a year, is expected to be utilized in the near future for the manufacture of rubber goods, pants cloth and automobile upholstery. Experiments are now being conducted in these lines and special machinery is being installed to make the two latter products. If the experiments prove successful manufacturing is expected to get under way before summer.

LOWELL, MASS. The Nashua Mfg. Co. have placed a large humidifying order with the American Moistening Co. for the equipment of their Suffolk Mills with atomizing equipment and Anco humidity controls.

NEW BEDFORD, MASS. Negotiations for the sale of part of the plant of the Fairhaven Mills have been opened with a New Jersey firm engaged in the manufacture of plushes, following a visit by representatives of the company.

WEST WARREN, MASS. A reduction in wages of approximately 7½% became effective at the Thorndike Co. last week affecting about 600 employes. The plant is operating on a part time schedule.

DOVER, N. H. The Pacific Mills are maintaining a full production schedule at their local plant, with night shift.

NEWMARKET, N. H. The Newmarket Mfg. Co. is operating its mill on a capacity schedule with employment of full working force.

COHOES, N. Y. The Harmony Mills are now running on full time weekly schedules following resumption of operations in the spinning department of one of the large plants.

COHOES, N. Y. The Mohawk Mop Co. has been purchased by Charles Newell, of Newell & Co.

*BURLINGTON, N. C. The Elmira Cotton Mills, under a resale Feb. 25, were bid in at $130,000 by W. T. Cheatham, treasurer of the company. This figure represents an increase of $80,000 over the first sale when the National Dye Works, Burlington, placed a bid of $50,000 for the property, including all buildings and machinery. Mr. Cheatham, pending court action on his bid, would not make any statement regarding plans for reorganization.

GASTONIA, N. C. Closing of the Social Mill of the Manville-Jenckes Co., at Woonsocket, R. I., will have no effect on the southern mills of the company, according to J. W. Clark, vice-president and manager of the firm's southern properties. The Loray Division, at Gastonia, is running full time.

ROCKY MOUNT, N. C. The village in which is located the Rocky Mount Mills, incorporated in a law to itself, has decided to surrender its charter and become a part of the city of Rocky Mount. The city of Rocky Mount agrees to pay the Rocky Mount Mills $400 annually for the use of Riverside Park, owned by the mills, and $500 annually for the upkeep of the property.

RONDA, N. C. The Ronda Cotton Mills which were sold at a receiver's sale a short time ago to Dr. J. W. Choate and associates, of Salisbury, N. C., have been reorganized under the name Wilco Mills, Inc., with authorized capital of $200,000. The incorporators of the new company are T. W. Church, J. L. Poplin and R. L. Hickerson, all of Ronda.

CROMPTON, R. I. More than 1000 yards of velvet, being dried in the paint processing room of the fustian department of the Crompton Co., were damaged by water from sprinklers Feb. 25, when fire broke out there.

WARREN, R. I. Business at the Warren Mfg. Co. has improved sufficiently to warrant steady work for more than 200 hands on a night shift. For the last few months a full day schedule has been in effect.

PELZER, S. C. Two hundred narrow looms are being transferred from the plant of the Pelzer Mfg. Co. to the Tucapau (S.C.) Mills. They are being replaced by broad looms, according to J. W. Kelly, general superintendent of the Pelzer plant.

* Indicates previous mention of project.

WOOL

New Construction and Additions

*MONSON, MASS. Satisfactory progress is reported on the construction of the new power house for the A. D. Ellis Mills, Inc. and it is expected to be completed by April. The mills are in operation day and night as they have been for some time.

Fact and Gossip

FISKDALE, MASS. The local branch of the Hamilton Woolen Co., Southbridge, Mass., which had been operated four years, closed on Feb. 23 and the equipment will be moved to the Southbridge plant.

GLEASONDALE, MASS. Henry F. Long, state commissioner of corporations and taxation, has notified the town assessors that the recent action of the town in voting a 33⅓% tax reduction to the Gleasondale Woolen Mills is illegal and of no binding effect. The mills had not asked a reduction.

JEFFERSON, MASS. The lower mill of the Jefferson Mfg. Co., which had been shut down for several months, has resumed operations with nearly all the looms running.

LEICESTER, MASS. The Leicester Woolen Co. has curtailed operations to four days a week.

MONSON, MASS. The Monson Textile Co., Inc., which started operations in the buildings formerly occupied by the Monson Associates, is running its 28 looms on a full time basis. Wm. F. C. Martins, a graduate of the Lowell Textile School, is the superintendent.

NORTH ADAMS, MASS. The Hoosac Worsted Mills of the Arlington Mills have adopted a night shift in addition to regular full day production, and will maintain the increased schedule for an indefinite period.

PITTSFIELD, MASS. James & E. H. Wilson, Inc., manufacturers of fancy woolens, men's and women's wear, automobile cloths, woolen blankets, etc., will discontinue business as soon as goods now in process of manufacture are completed, due, it is said, to the depressed condition of the industry.

UXBRIDGE, MASS. The Hecla Mill of the American Woolen Co. recently reported sold to the Cherry Valley (Mass.) Woolen Co. is not expected to resume operations within six months.

UXBRIDGE, MASS. The Elmdale Mill of S. F. Scott & Sons, Inc., is expected to further curtail production to less than three days a week.

UXBRIDGE, MASS. The Calumet Mills of the Stanley Woolen Co. have stopped night work and are expected to curtail production to less than five days a week.

WARE, MASS. The Ware Woolen Co. is running on a full time schedule, 50% of the equipment being in operation, while the Gilbert Mfg. Co. is operating on a three and four day week

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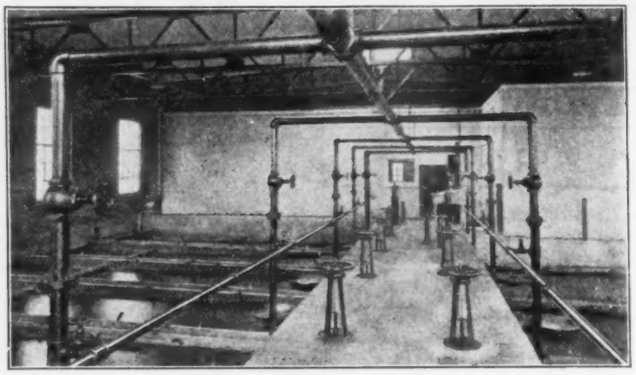
CLEVELAND, Guardian Building
CHICAGO, Marquette Building
DETROIT, Ford Building
CINCINNATI, Traction Building
ATLANTA, Candler Building.
PHOENIX, ARIZ., Heard Building
NEW ORLEANS, 344 Camp Street
HOUSTON, TEXAS, 1011-13 Electric Building
DALLAS, TEXAS, 2001 Magnolia Building
DENVER, 444 Seventeenth Street
SALT LAKE CITY, 405-6 Kearns Building
SAN FRANCISCO, Sheldon Building
LOS ANGELES, 404-406 Central Building
PORTLAND, ORE., 805 Gasco Building
SEATTLE, L. C. Smith Building
HAVANA, CUBA, Calle de Aguiar 104
SAN JUAN, PORTO RICO, Royal Bank Building
HONOLULU, H. T., Castle & Cook Building



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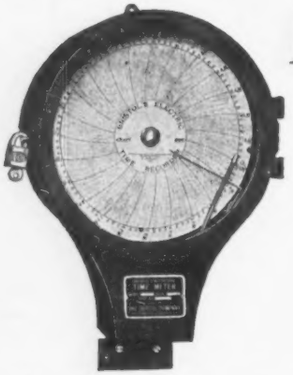

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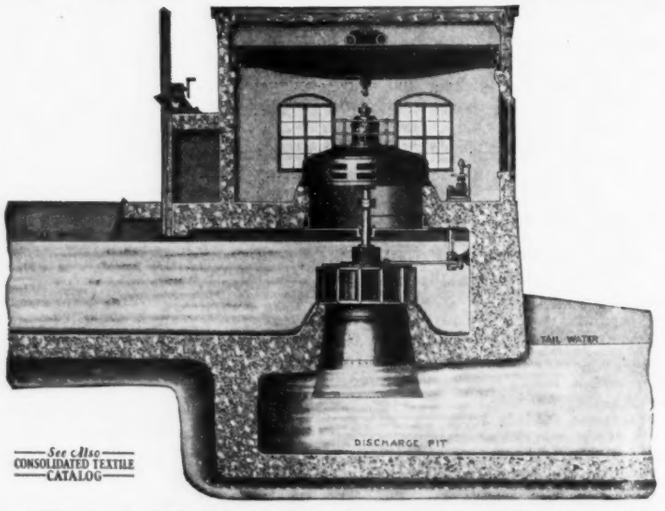

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PETERBOROUGH, ONT., CANADA.....William Hamilton, Ltd.

Mill News—Continued

schedule alternately, using half of its equipment.

TILTON, N. H. The Elm Mills resumed production on Feb. 23, after being closed since Jan. 26, on account of a strike of employes. The plant will develop a capacity schedule at an early date. It has been agreed that in the future all grievances of workers shall be submitted to a committee of mill employes for adjustment.

AMSTERDAM, N. Y. Night work has been started in Plant No. 1 of the Shuttleworth Branch of the Mohawk Carpet Mills making about 60% of the company's mills running overtime.

AMSTERDAM, N. Y. Stephen Sanford & Sons, Inc., are increasing operations with a three-day-week schedule in effect in virtually all departments.

ELKIN, N. C. The Chatham Mfg. Co. has awarded the contract for wiring 33 bungalows in its mill village.

WOONSOCKET, R. I. The real estate, including mill building, storehouse, land, etc., of the Glenbrook Worsted Mills, whose assets recently were sold by the referee in bankruptcy to the Wm. B. Dunn Co., Providence, for $50,100, was sold last week to Gustave Friedrichs, president of the Woonsocket Dyeing & Bleaching Co. The amount involved in the deal was not made public. The machinery in the plant has been sold by the Dunn company to several textile corporations.

SAN ANGELO, TEX. It is reported that a company is being organized by C. C. Cole and T. Davis, both of San Angelo, to construct and operate a two-story woolen mill. It will be brick and reinforced concrete, estimated to cost in excess of $350,000, with equipment.

SEATTLE, WASH. Judge J. T. Ronald in Superior Court recently appointed Philip Rowe and William L. Crowe as receivers of the Matzen Woolen Mills at Kirkland, Wash., in furtherance of plans for the complete reorganization of this industry. Messrs. Rowe and Crowe have announced that they are conducting an exhaustive examination of the entire business, with expectation that the firm will be entirely reorganized and put on a substantial basis within a short time.

PARSONS, W. VA. The Dorman Mills, recently organized with capital of $200,000, have purchased the blanket mills at Parsons which have been operated for several months as a branch of the Acworth (Ga.) Mills. Franklin W. Dorman, of New York, who also is vice-president of the Acworth Mills, is president of the new corporation and E. A. Sill, assistant treasurer of the Acworth Mills and who has been in charge of the Parsons plant, is treasurer of the Dorman Mills.

WEST BEND, WIS. The West Bend Woolen Mills have filed notice of company dissolution under state laws.

KNIT

New Construction and Additions

ATHENS, ALA. The Volunteer Knitting Mills, Chattanooga, Tenn., one of the Campe Corp. interests, have bought the Wellman Cotton Mill, which, according to latest reports, has an equipment of 7,328 ring spindles. It is also announced that the Campe interests have bought the entire spring needle equipment of A. V. Morris & Sons, Amsterdam, N. Y., consisting of about 100 Cooper spring needle machines, together with complementary machinery for the production of men's light and heavy weight union suits. Construction of extensions to house the additional equipment at the Volunteer mills will soon begin.

*FLORENCE, ALA. Actual construction work on the new buildings for the Gardiner & Warring Co., now located at Amsterdam, N. Y., commenced Feb. 28. Robert & Co., Atlanta, Ga., are the engineers.

FORT PAYNE, ALA. It is expected that contract for a 60 x 200 ft. addition to the plant of W. B. Davis & Sons, Inc., will be awarded on March 10.

HERKIMER, N. Y. The Union Mills, Inc., are installing new steam knitting machines for rayon in their Gem Department and are expected to have 100 such machines in operation by the end of 1927.

*MORGANTON, N. C. The Morganton Full Fashioned Hosiery Co. has been chartered to manufacture and sell all kinds of hosiery with authorized capital of $300,000 preferred and 7,000 shares common, without par value. Of this amount $50,000 has been subscribed by R. O. Huffman, A. M. Kistler, E. W. Phifer, and several others, all of Morganton.

PHILADELPHIA, PA. Wallace Wilson Hosiery Co., Inc., 4368 Waln street, Frankford, manufacturers of seamless hosiery, have recently installed a number of full-fashioned machines for the manufacture of ladies' hosiery.

*PHILADELPHIA, PA. Sunrise Knitting Mills, a concern incorporated last July, have started the manufacture of full-fashioned hosiery at their new mill building at Edmund and Hellerman streets, where they recently completed the installation of two machines as their initial equipment.

*CHELTENHAM, PA. The Dannemann Kuehnert Hosiery Co., recently established at 500 Jefferson avenue, will sell its product of women's full-fashioned silk hosiery through Edward Mitchell, 220 Fifth Avenue, New York. The company is capitalized at $100,000; Otto Kuehnert is president and Simon Dannemann treasurer. Equipment consists of 20 f. f. machines.

INDIANA, PA. The Indiana Textile Mills, Inc., a new company capitalized at $150,000, will soon start construction of a plant on West Oakland Avenue. The new mill will manufacture hosiery, which will be sold through Shreve & Adams, New York. George T. Buchanan is president of the Indiana Textile Mills; J. Clair Sloan, vice president; Thomas N. Robinson, treasurer, and N. DeWitt Ray, secretary. Leonard A. Fay, of Philadelphia, has been appointed general manager.

MANITOWOC, WIS. The Martz Knitting Co. has plans for a one-story addition to its mill, 28 x 60 ft., to be used largely for warehouse service, and will soon let contract for erection.

GUELPH, ONT., CANADA. Lander Bros. have completed the installation of a

* Indicates previous mention of project.

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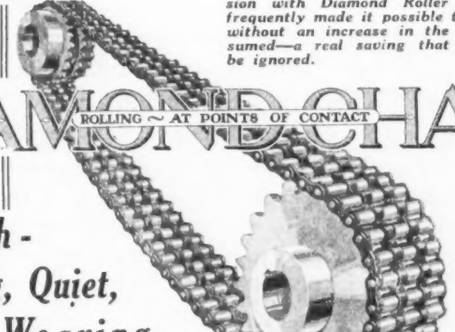

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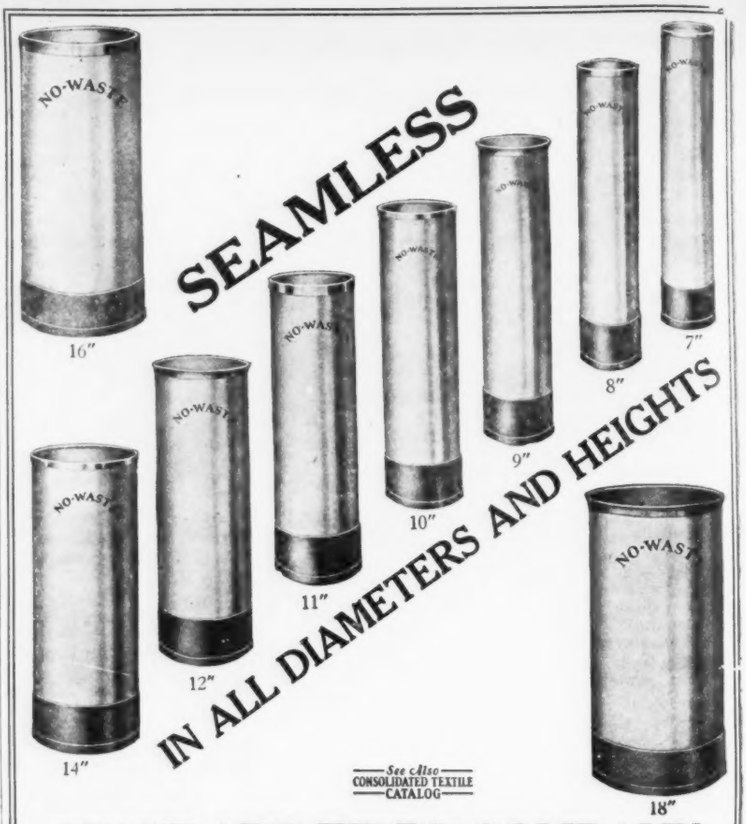

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MOND "Seventy" ALLOY

American Mond Nickel Company.

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Mill News—Continued

number of machines for the manufacture of full-fashioned hosiery.

Fact and Gossip

BOSTON, MASS. Harold C. Thompson, of Boston, has been appointed receiver of Hall Bros., sweater manufacturers, by Judge Louis Cox of the equity session of the Superior Court, on petition of the Bellevue Knitting Co., Inc., Boston, for alleged failure to pay an execution for $111, taken out in Jan. 1926. The receiver has been directed to wind up the business.

*WARE, MASS. The Ware Valley Mfg. Co., which took over the underwear business and No. 3 mill of the Otis Co. on Feb. 21, will occupy the same offices as the Otis Co. for the present, but in the future it is planned to have an office solely for its own use and it is also expected the company will have its own power plant later. It is also planned to move the bleachery from the upper part of the yard to the basement of the No. 3 mill.

GLENS FALLS, N. Y. Clark Bros., manufacturers of silk gloves, silk jersey cloth, etc., have resumed overtime schedules following a curtailment for inventory.

MOHAWK, N. Y. The Duofold Health Underwear Co. is operating at near capacity in virtually all departments.

ST. JOHNSVILLE, N. Y. The Union Mills are again running on full time weekly schedules after the annual inventory.

PHOENIXVILLE, PA. A charter of incorporation has been issued to a company to be called Perseverance Knitting Co., Inc., having a capital of $125,000. Clarence Epright is treasurer while Ambler Davis and Jonothan Davis of this city are stockholders. This is an incorporation of the underwear manufacturing concern that has been operating under name Perseverance Knitting Co., Ltd., at 543 Washington St., making women's and children's knitted underwear, of which Ambler Davis is chairman and Jonothan Davis is treasurer.

SOUTH LANGHORNE, PA. It is reported the United States Knitting Co., manufacturers of women's full-fashioned hosiery, contemplates starting a branch plant at Petersburg, Va., to be known as the Virginia Silk Hosiery Co., Inc., to manufacture similar lines as at their main plant here.

TOPTON, PA. The Majestic Knitting Mill Co. has closed down its plant due to lack of orders.

MILWAUKEE, WIS. The Hercules Knitting Co. has filed notice of increase in capital from $75,000 to $125,000.

HAMILTON, ONT., CANADA. Robert Denman, President of Denman & Co., Hamilton, has purchased Zimmerknit, Ltd.

SILK

New Construction and Additions

MONTOURSVILLE, PA. H. Warshow & Son have started construction of an extension to their plant, to have approximately 4,000 sq. ft. of floor space.

*PERKASIE, PA. The Perkasie Industrial Co., J. H. Horn, secretary, will soon take bids for the construction of a one-story silk mill, 65 x 100 ft., on Ninth St., to be occupied by a company whose name is temporarily withheld. It will cost about $32,000. A. Oscar Martin, Doylestown, Pa., is architect.

* Indicates previous mention of project.

Fact and Gossip

PATERSON, N. J. The Emily Silk Co., recently chartered with a capital of $50,000, to operate a local mill for broad silk production, will be represented by Stanley Huptich, 1 Bridge St., Paterson, one of the incorporators. The other incorporator is Edmund Fischer.

PHILLIPSBURG, N. J. The Phillipsburg Silk Co. has been organized with a capital of $100,000 to operate a local mill. Incorporators are Julius Rosenfeld, 358 South Main St., Phillipsburg, Simon Korpan and Joseph Schnabel.

ALLENTOWN, PA. Charter has been granted to company called Temple Silk Co. to weave and manufacture silk fabrics, with a capital of $15,000. Louis Subin, of this city, is treasurer.

SCRANTON, PA. Cedar Throwing Co. is the name of a company recently incorporated to throw and spin silk and wool products, having a capital of $25,000. Charles Marks, 511 11th Ave., Paterson, N. J., is treasurer and E. D. Montebello, 944 Monroe Ave., Scranton, is also interested.

DYE, BLEACH AND FINISH

New Construction and Additions

*FISKDALE, MASS. Golding Bros. Co., New York, which purchased the No. 1 mill of the Fiskdale Finishing Co. last September, expect to start operations April 20 under the name of the Sturbridge Finishing Co. Four printing machines already have been installed and another will be added later. Various types of finishing machines are in process of installation.

PHILADELPHIA, PA. A portion of the equipment of A. & R. Willgoos Dyeing Co., 2824 Jasper St., has been moved to the building occupied by the Belgrade Dye Works, at Belgrade and Auburn Sts. where a dyeing business is being started under the direction of James Kane formerly associated with the Majestic Silk Hosiery Dyeing Co., Inc., 4319 N. Third St.

Fact and Gossip

NORTH ADAMS, MASS. The Consolidated Textile Corp. has placed its local Windsor Print Works Division on a capacity schedule, with overtime night shift. The new basis will be continued for an indefinite period.

PATERSON, N. J. The Eastside Piece Dyeing & Finishing Co., recently formed with a capital of $100,000, to operate a local mill, will be represented by James Rizio, 396 21st St., one of the incorporators. The other incorporators are Anthony and Louis Rizio.

PATERSON, N. J. The Pilgrim Piece Dye Works, Inc., recently formed with a capital of $200,000, to operate a local plant, have appointed Oscar J. Richard, 80 George St., Paterson, as company representative.

WOONSOCKET, R. I. The Woonsocket Dyeing & Bleaching Co. has arranged for an increase in capital from $10,000 to $200,000.

You can scour wool at a lower temperature

TO woolen mills that are desirous of doing their scouring at lower temperatures. Or, that wish to use a less concentrated solution of alkalies in this operation, here is a suggestion.

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Wool scoured using OAKITE is softer, whiter and its absolute cleanliness will have its effect all through the succeeding operations, so that the finished product shows an improvement that is remarkable. The colors are clear, not muddy, and the cloth live and lustrous. Through the saving in soap, time and labor, these results are achieved at a decrease in cost.

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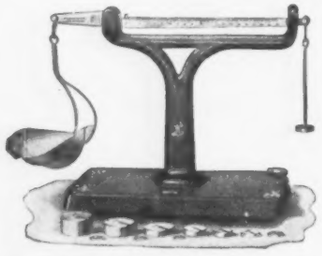

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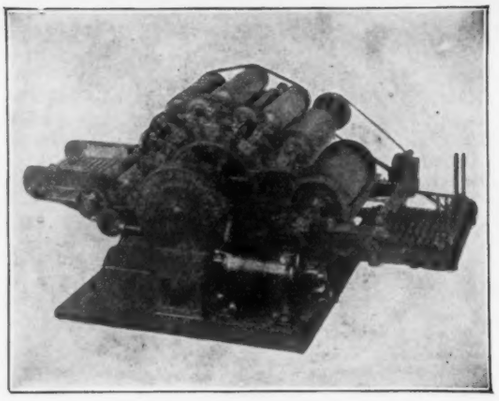

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The hand card used for securing sample cardings was a primitive machine indeed. Today there is a more efficient—more dependable—method—it is the Sample Carder shown above.

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We will be pleased to send you complete information.

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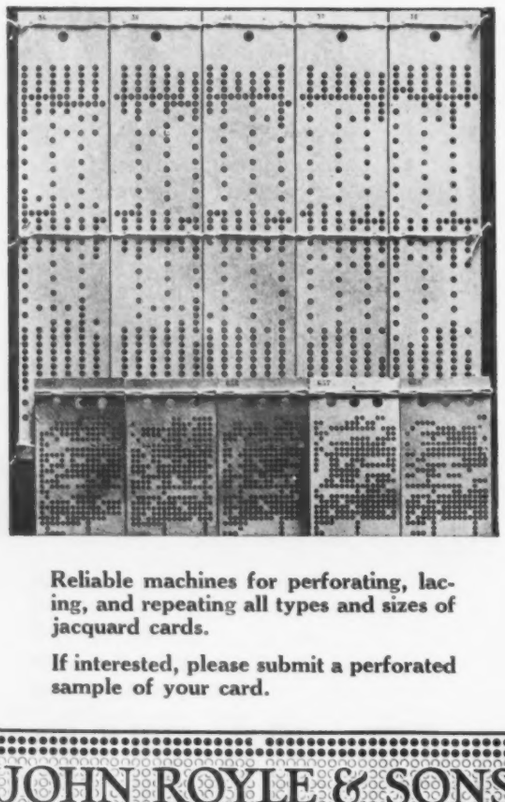

Reliable machines for perforating, lacing, and repeating all types and sizes of jacquard cards.

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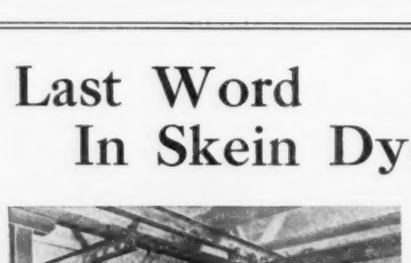
The Last Word In Skein Dyeing.



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Hussong Dyeing Machine Company
Groveville, New Jersey

KNIT GOODS

Fall Hosiery Spotty but Sellers Hopeful

Fiber Goods Suffer from Over-Production—Fancies Continue in Demand

Hosiery selling agents are optimistic about the future but they admit business will have to be fought for and traveled for. It is going to cost more to do business in 1927 than it has in the past for buyers are content to wait until it is absolutely necessary for them to place their orders. They must be met on their home ground and the orders dragged out of them. The majority admit that the business during the last three months corresponds very favorably with that of the corresponding period of 1925-26. There are those who exceeded their record of last year and who feel very comfortable as to their situation. It is true this cannot be said of the entire trade but they believe business is going to come and if it does come they will be in a satisfactory position.

Fall Business Spotty

From men on the road there comes the report that while certain buyers have operated to a very slight extent, or not at all, for fall, others claim they are through and have bought all the merchandise they will need, at least until the buying season is well under way. The same spotty condition prevails in the primary market. For instance, there are those who state with much positiveness that they have done a larger cashmere business this year than last and others declare that their business on silk and wool has been eminently satisfactory. This cannot be said to apply to the trade generally for there is still much to be desired as to fall business and the fact that salesmen are sending in original orders every day is prima facie evidence that the trade as a whole has not completed its preparations. It must be admitted that the principal activity is for spring delivery and here also spottiness is a characteristic. The majority of infants' hosiery manufacturers are none too jubilant over the volume of their business. On the other hand, there are those who take more or less satisfaction in informing the buyer who wants additional quantities that he cannot have delivery before the first of May, for instance. There have been cases of late of buyers who have come to this market pleading for service on infants' goods and proving that they are in a most uncomfortable position as far as their trade is concerned. These buyers are not entitled to very much sympathy and do not as a rule get it from the agent for they were argued with most earnestly last year to place their orders in time for satisfactory deliv-

(*Continued on page* 111)

An Underwear Prophecy for 1927

Belief That Conditions Will Approximate Those of 1919, When Business Came Late in Year

UNDERWEAR selling agents are indulging in prophecies these days. They admit that the business passing is far from what might be desired and yet there are few who are not optimistic respecting the future. "The results of 1926 will not differ much from those of 1919," said a well-known selling agent this week. "In the latter year the first quarter was without profit or orders but the last quarter was the most profitable period in the underwear business. All conditions point to a similar experience this year." This same authority admitted there were a good many unsatisfactory conditions confronting the trade today. Buying for fall has not been what was expected. The principal business passing is for current delivery. This statement has certain notable exceptions for there are lines particularly of branded goods, which have sold well for fall. An agent for one of these lines declared this week that his mill had sold practically all it intended to sell for the first delivery period and would withdraw lines except for delivery after the middle of the year, and naturally at a higher price.

Reductions Not Salutary

As the market develops, it seems to be more and more evident that the new lines which have been brought out at a lower price have not met with the general approval many had anticipated. As a matter of fact, complaints have been heard in certain important quarters regarding the policy of bringing out a lower priced garment at this time. It is known that there have been certain instances where buyers using a large quantity of certain of these lines have refused to continue to market them. It is also known that there are certain large operators who have done practically nothing at all. They may have bought a few cases of the cheapest things in the market but on their bulk business have determined to wait indefinitely. On wool goods the situation is far from satisfactory. Buyers are withholding their orders, notwithstanding the fact that prices are below a level at which the merchandise could be replaced today and in view of the fact that there seems to be nothing in the near future which would warrant any reduction but if anything an advance. This is true in spite of the fact that the supplies carried over have been very small, and that the majority of stocks are seemingly low.

Reductions a Mistake

If selling agents were the only class of individuals who deprecated the reduction in heavyweight ribbed underwear, it might be said that there was an unsubstantial basis for such an opinion but buyers themselves in many cases claim this was a tactical mistake and express themselves as regretful that such action was taken. They claim it is going to make it harder for them to sell standard lines, for the retailer will argue these were bought at a cheaper price and will demand that they give them the advantage of such reductions. It also is stated that the new lines which have been brought out at a lower figure were a tacit admission that satisfactory business was not secured on original lines at the opening of the season. This, however, is not regarded as a sufficient reason for the procedure by important manufacturers but rather it is felt that the business of smaller concerns with a comparatively small production acted as a thorn in their side and made them determined to secure orders which might have gone to the comparatively insignificant producer at a lower price. While it is admitted that the reduced quotation has been more or less demoralizing on fall business, yet there are certain agents who declare they have been able to sell on a basis of quality and that the low figure has not been much of a handicap. While conceding that business has been placed by buyers who are looking for price alone, at the same time they have been able to market their product on a quality standard without any great difficulty.

Rayon Underwear Increases

Lines of rayon underwear are apparently showing steady improvement, with the volume of business larger than ever. It is admitted there are inferior goods on the market but the buyer is showing discrimination with the result that the merchandise which has quality is coming into its own and is competing very strongly with other lines of garments. The strengthening situation in raw material has also given the buyer of rayon goods more certainty and greater willingness to buy in bulk. One concern whose line has not been on the market very long but whose merchandise is generally admitted to have intrinsic merit cannot make deliveries before the first of May. Others report similar conditions although not sold ahead as far as this for the most part.

Athletic Type Needed

The success of the athletic knitted shirt and woven fabric drawers has led to the question in certain circles among selling agents why knit underwear manufacturers do not take advantage of the success that has been developed in this class of undergarments to bring out lines of knitted drawers of the roomy, comfortable style that is popular in the running trunk. It is felt that with a campaign of education it could be demonstrated that this class of garment is superior in many ways to the woven fabric and that it could by careful propaganda be made the vogue. It is felt the knit underwear manufacturer can learn a good deal from the nainsook people, especially in the cut of garments. If some far-seeing manufacturer could come out with a line cut on the same pattern as many of the up-to-date fabric garments are made and give publicity to the fact, it is believed that a success might be made of such a garment. The nainsook people have learned it is much better to give a loose-fitting garment in all its measurements than one which is possibly too tight in some particular. The advantage of producing such a comfortable garment is perhaps not appreciated to the extent it should be by the knit underwear trade.

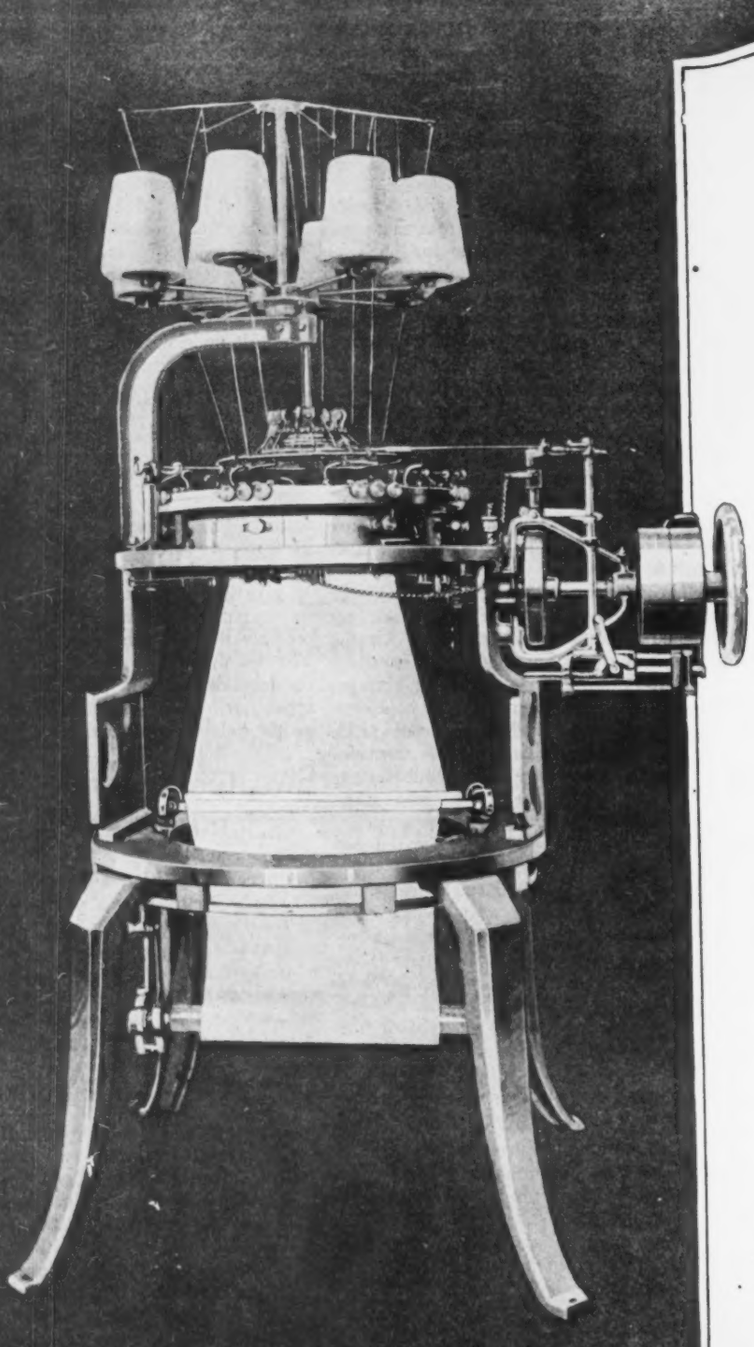
Sweater Salesmen Sending in Orders

Reduction in Fleece-Lined Coats No Cause for Apprehension

Comparatively few buyers of outerwear have been in the local market of late, but salesmen are on the road and are sending in business daily. It is evident the majority of buyers have become converted to the belief that sweaters will sell to the general public this fall. This is especially true of the larger centers and may not apply as strongly to the country districts. It is a generally accepted belief that the woven lumberjacks have had their day and will not be a factor in the future. Reports from retailers are that they are not selling and a good many distributors are declining to carry them. A significant fact is that certain manufacturers of lumberjacks are offering their accounts around the selling trade, but are not meeting with much enthusiasm on the part of sellers.

Reduction in Fleeced Coats

The sweater market has been more or less disorganized by the announcement of a new line of fleece-lined coats which has been brought out at 50c below certain standard lines. While it is generally admitted the garment in question is sub-standard and cannot be compared with well-known lines on which a good business has already been done the announcement comes at a time when the jobber is planning to go on the road. Knowledge of the new line and price



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We have issued a new edition of the complete and informative book, "The Science of Knitting." Price $2.00.

WILDMAN
SPRING NEEDLE BODY MACHINE

Knit Goods—Continued

is obtained very quickly by the retailer who will demand that a price be made him based on the cheaper price which is available in the primary market. It is not expected agents will change their prices on garments they have sold nor is it expected business which has been placed will be disturbed by this isolated instance of reduction.

Ladies' sweaters are receiving little attention from the jobbing trade although it is recognized the retailer is featuring these mostly of the pull-over type in imported goods. It is felt this development in connection with two-piece suits of the better type of fancy sweater may lead to a demand for domestic merchandise on lower grades. So far agents have been so busy fighting their own battles on staple lines they have given little attention to fancy lines of ladies' goods.

Bathing Suit Buying Spotty

Bathing suits are selling every day, but there are buyers who have not done anything on this line for the summer season. It is felt they may be disappointed in securing deliveries if they delay too long, for a good many manufacturers have curtailed production and others will discontinue making this line unless business is received in the near future. The element of over-production has been recognized by the buyer and has been one of the causes for his delay in operations. Many over-bought in the past miscalculating the possible buying capacity of their trade. But the feeling is prevalent today that the pendulum is in danger of swinging too far in the opposite direction and that buyers will lose business because they are not prepared to satisfy their customers' demands.

Fall Hosiery Spotty

(*Continued from page* 109)

ery and in a way which would allow the manufacturer to operate his plant on the most profitable basis and at a price which would be advantageous to the buyer himself. These arguments are recalled to the mind of the buyer who is presenting his case and demanding service and it is not hard to prove that there has been little reciprocity in the game.

Fiber Goods Slow

Notwithstanding the strengthening position of rayon and the apparent lack of risk in anticipating requirements, selling agents declare that fiber goods are probably the most unsatisfactory division of the hosiery market. There is undoubtedly an over-production of this class of merchandise. A large number of manufacturers have gone into the business, many of them unqualified to make first class goods and the buyer has become surfeited with the offerings, good, bad and indifferent, that have been made him. Last year an all-over rayon stocking could not be bought to sell below $1.00 retail, except in most isolated instances, but today there are a number of lines on the market that can be sold at 50c. This means that they have entered an altogether new class and the buyer apparently has not yet become adjusted to this type of merchandise.

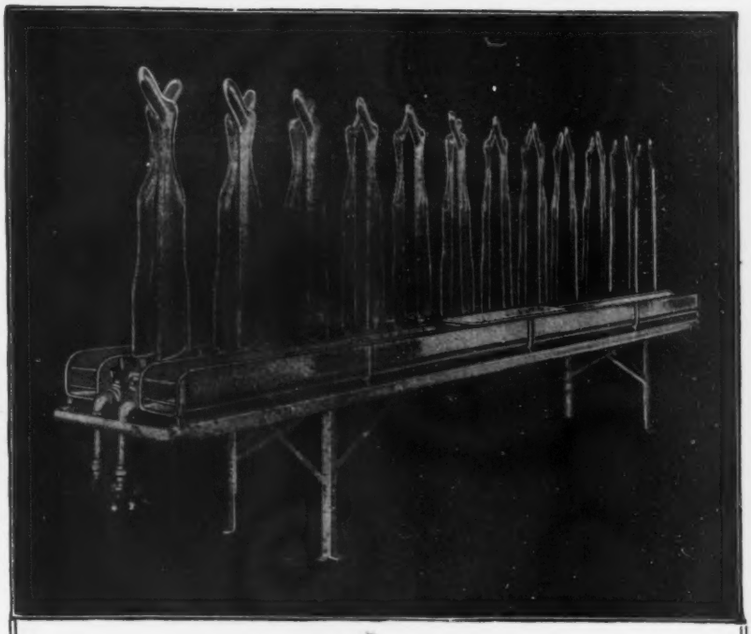
Fancies Well Considered

Although staple lines of hosiery have shown something of an improvement during the last few months, there is no apprehension in the minds of agents regarding the continued favor in which fancies are held. This is true not only of men's half hose but of women's goods as well. Silk and wool, or more truthfully speaking, rayon and wool, are being taken in both types of merchandise and no one seems to feel that the gamut has been run on new ideas and patterns. New styles are being constantly brought out and predictions of still newer effects are being made. There is a tendency on the part of buyers to demand confined styles in fancies. This is particularly true of the larger operators and selling agents are finding that to do bulk business they must make particular patterns for specific customers and promise not to broadcast them to the trade in general.

Profits in Fancies

It has been hard to persuade a good many manufacturers that there is any profit in making fancy hosiery. They have contended that the detail and expense of attachments, as well as the uncertainty of demand, all militate against a decent margin of profit. One who has been in this line for a number of years explained this week that the manufacturer who went into the fancy business half-heartedly was likely to make only a moderate success or a failure. He further stated it was necessary to get out a good sized production and to attain a reputation for novelties if it was expected to make a success. He instanced a number of manufacturers who have operated on both of these plans. The manufacturer who bought an attachment costing, for example, $100 to $125 and put these attachments on two or three machines to see how they would work out have come to the conclusion there is nothing in the fancy business. On the other hand, manufacturers who fitted up a whole range of machines with these modern attachments and who conducted the fancy business on scientific lines, bring out new styles before old ones had ceased to be in demand, and who are careful not to accumulate stocks, are enthusiastic about their record. One specific instance was detailed of a manufacturer who had a capital of $90,000 a few years ago—since the war. Today he is worth a half a million dollars and has made it all on fancies and is a firm believer in their future.

NEW MILFORD, PA. G. C. Dean has discontinued the manufacture of knit cloth and is now located in St. Petersburg, Fla.



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The Most Widely Used Method of Hosiery Finishing in the World

1. The only Form with which the Paramount Patented Holder can be used. This Holder produces even lengths and saves fabric.
2. The only Form with sharp edges for producing pronounced and perfect creases assuring flat lying fabric.
3. The only Form with special oval construction and patented thick toe to eliminate ears and puckers in the stocking.
4. The only Form with Patented Toe-Grooves to insure rapid boarding and perfect alignment of the toe gores.
5. The only Form made in one piece and of aluminum, insuring long life and permitting reasonable exchanges. Aluminum can be recast when change of shape is necessary. This metal will not stain or corrode and it takes a smooth high polish so essential in finishing Chiffon hosiery.
6. The only Form with three types of Grooves for perfect alignment of seams for boarding full-fashioned and mock-seamed goods.
7. The only Form mounted on All-Metal Table with Patented Removable Aluminum Troughs, facilitating changing of forms and cleanliness. Troughs are made with rounded corners eliminating possibilities of pulling threads.
8. The only Form equipped with Angle-Base Attachment enabling operative to see both sides of the stocking without moving the form. It facilitates the stripping operation and produces improved finish of the tops.

Paramount Equipment furnished on sale or rental basis.

See also CONSOLIDATED TEXTILE CATALOG

PARAMOUNT TEXTILE MACHINERY CO.

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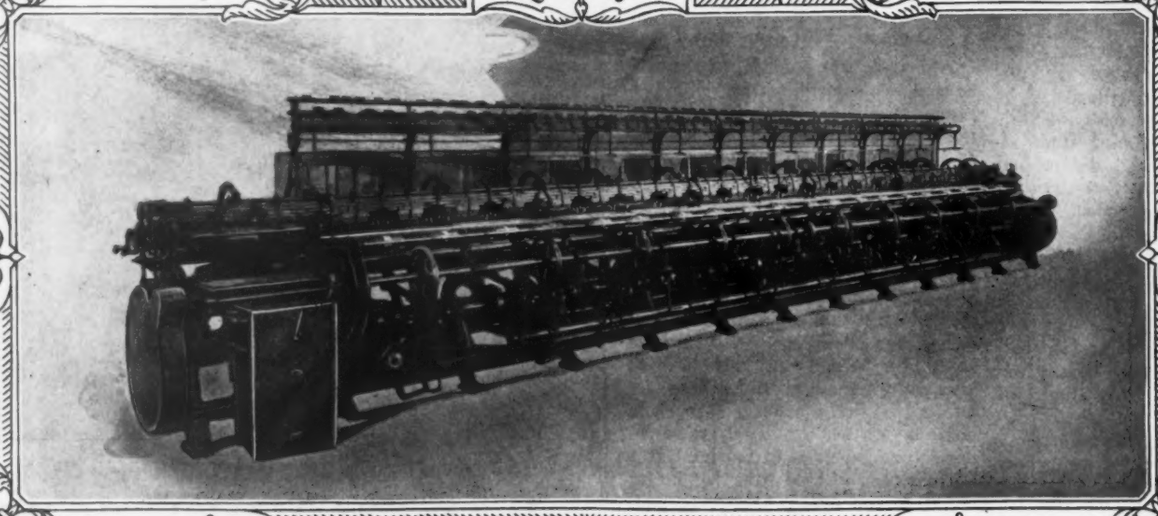

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If the need for expert advice and immediate service arises, there's a great deal of satisfaction in knowing that a telephone call will reach the designers and makers of your equipment.

TEXTILE MACHINE WORKS
Reading, Pa.

As far as well-dressed women are concerned, there is no stocking but Full-Fashioned.

See also CONSOLIDATED TEXTILE CATALOG

The READING

FULL FASHIONED KNITTING MACHINE

Knit Goods—Continued

To Protect Patent

Gotham Starts Suit Against Combine Hosiery for Infringement

The Gotham Silk Hosiery Co. has filed suit in the United States District Court for the Southern District of New York, against George A. J. Healey, Combine Hosiery Corp., and P. Friedman, alleging infringement of its United States Letters Patent covering the pointed heel full fashioned hosiery sold under the trade name "Pointex" and asking for a temporary injunction restraining the defendants from manufacturing and selling hosiery which infringes upon its patent rights pending the final determination of the suit.

George J. Healey one of the defendants named in the suit was formerly vice president and sales manager of "Onyx" Hosiery, Inc., and is now president of the Combine Hosiery Corp. P. Friedman is a retail dealer.

The complaint charges that defendant corporation was organized through the efforts of Mr. Healey for the express purpose of competing with the Gotham Silk Hosiery Co. in the manufacture and sale of hosiery, made in accordance with and infringement of the patent in suit; also that Mr. Healey induced a number of employes of "Onyx" Hosiery, Inc., to join with him in the formation of the defendant company for the purposes above set forth. That the Combine Hosiery Corp. have placed on sale and are now selling pointex heel full fashioned stockings in infringement of patent in suit. Mr. Friedman is charged with selling the infringing hosiery made by the Combine Hosiery Corp.

The Gotham Silk Hosiery Co., Inc., and its licensee, Julius Kayser & Co., notified the trade several weeks ago that it would take legal action against any infringers upon the patent rights in the pointex heel stocking controlled by them.

The filing of this suit is the first action taken by Gotham Silk Hosiery Co. to enforce its rights under its patent.

To Sell Children's Hose

Lawrence & Co. to Distribute Hartford Line Under Ipswich Brand

Lawrence & Co. announce they have been appointed selling agents for the children's line of the Hartford Hosiery Mills, Nashville, Tenn., effective March 1. The firm of Charles Chipman & Sons have been handling the sales of this mill for some years.

The product will be distributed to the wholesale trade as formerly. By arrangement with the Ipswich Mills, merchandise will be offered to the trade under the Ipswich brand, as well as under customers' packing. In this way, Lawrence & Co. will be able to offer to Ipswich distributors a wider range of merchandise than heretofore. Ipswich has discontinued manufacturing the type of children's goods produced by Hartford.

Philadelphia Hosiery Committee Appointed

PHILADELPHIA.—The meeting of full-fashioned hosiery manufacturers held Feb. 23, at the Manufacturers' Club, was one of the largest ever held by this section of the industry, more than 35 different companies being represented. It was called in response to a letter sent to a number of manufacturers by Gustave Geiges, who is also an official of the Full-Fashioned Hosiery Workers Union. A committee consisting of Walter E. Zander, of Schletter & Zander, Inc., who is chairman, W. Park Moore, of the Hancock Knitting Mills and Jos. Haines, Jr., of the Haines Hosiery Mills, Inc., was appointed. This committee will communicate with all manufacturers of full-fashioned hosiery in the city and after securing their opinion on the questions involved, will report at a further meeting to be held Mar. 7.

Sweater Manufacturers Please Note

The following is part of a letter which appeared on the women's fashion page of the *New York Sun* one afternoon this week:

"Dear Eve: When I decided to come to Palm Beach I bought myself a pleated skirt of white flannel and two sweaters to wear with it. Now that I'm here the shops have newer and lovelier sweaters every day, and every time I'm tempted by one I think 'this is really an economy, because it will make my white skirt look new.' The result is a collection larger than my famous collection of hand-knitted sweaters in after-war days! But really they are so charming that I don't regret any of them.

"And I am very much in the mode, my dear, for I assure you that here no woman considers herself properly dressed during the day unless she wears a jacket or sweater, or both. . . .

"With love,
"CLARIBEL."

Pepperell Employes' Club Goes in for Sports

BIDDEFORD, MAINE.—It is something of an innovation for a textile mill to go in for sports, but indirectly this is what the Pepperell Mfg. Co. is doing. The good will resulting from its financing and sponsoring the new Pepperell Social & Athletic Club was apparent long ago. In every way the Pepperell's experiment in publicity and in cooperation with the social as well as the business interests of its employes is proving successful.

The club gymnasium has been put in charge of Tom Travers, an athlete and boxing promoter, who plans to put on boxing shows in the gymnasium twice a month. At first the talent will be largely local from the two cities of Biddeford and Saco.

THE public views a brand as a guide, a reputation to buy by.

The knitter knows that the production of today is the reputation of tomorrow, so he takes out insurance in the form of Torrington Needles.

The red box with the green label

The TORRINGTON COMPANY
Torrington, Conn., U. S. A.

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AACHEN, GERMANY

See also CONSOLIDATED TEXTILE CATALOG

This new cloth *deserved* new selling policies

how Kaumagraphs helped to effect them

Based on an interview with Mr. J. D. Hawke, Catlin & Co., Inc.

IN 25 years, there had not been a single basic change in the manufacture of napped cloth. Then, a little over a year ago, a new napped cloth was introduced. A blend of wool and cotton. Light in weight, yet wonderfully warm.

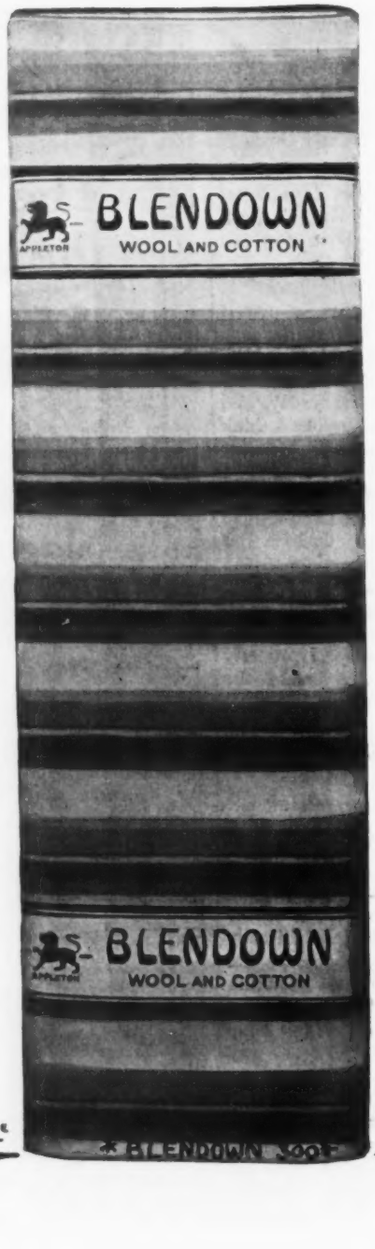
"Blendown," it was christened by Appleton & Co., Lowell, Mass., the manufacturers of this cloth. "And Blendown," decided Catlin & Co., Inc., the selling agents, "is a cloth to be really proud of. It is so distinctive in character, it deserves a distinctive selling policy." So Catlin & Co. adopted a selling plan radically new in their business.

For they decided to trademark "Blendown," to place the name at regular intervals of one yard each, along the selvage of each roll. In this way, they felt, they would identify this remarkable cloth, and prevent substitution of inferior fabrics.

But — how to apply that trademark? *There* was a problem. They carefully investigated several processes. But they found only one practical satisfactory method. It was the Kaumagraph Transfer method.

This investigation was made over a year ago. Since then, at the mill, the name "Blendown" is applied by machine, *with Kaumagraph Transfers,* to every yard of material produced.

"The Kaumagraph Transfer," says Mr. J. D. Hawke of Catlin & Co., Inc., "offers the most beautiful, convenient and economical method of trademarking. It has proven satisfactory in every way. It is especially remarkable how evenly the name is applied along the selvage by the Kaumagraph method."



This is the Kaumagraph mark

THE PRACTICAL METHOD OF TRADEMARKING

The Kaumagraph Transfer method is the only practical method of applying trademarks to hosiery, silks, cotton goods, woolens, and other textile fabrics. With Kaumagraphs you can stamp your trademark on the fabric in any color—with a beautiful mark that won't smudge or discolor. Kaumagraphs can be applied by machine along the selvage; by hand in a second as an end stamp; or on the toe of hosiery.

Kaumagraph's Service Department offers you a helpful, untiring assistance in designing or applying a trademark. Kaumagraph's Lithographic Department offers unequaled service in quality and prompt deliveries, on such lithographic requirements as board-end labels and hosiery packing.

This Twin Service is without parallel — only Kaumagraph offers it. We urge you to send the coupon below today for samples of our Lithographic work and of Kaumagraph Transfers, to learn how Kaumagraph's Twin Service can serve you.

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Please send us samples of Kaumagraph's Twin Service, together with full information.

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FABRICS

Wool Goods Tangled up in Style

Variety in a Vengeance Has Puzzled Clothiers on What to Choose

WOOL goods selling agents are still fighting their way through a maze of style difficulties. The clothier has called for great style variety, and he has gotten it with a vengence. The dazzling display of new and original ideas in patterns and color combinations have probably never been exceeded in the history of the market. For the time being this effort on the part of the fabric manufacturer to offer the thing the clothier wants in order to facilitate business, has reacted to the disadvantage of many sellers, in that the clothier is bewildered and is so uncertain as to what will be good out of the myriad styles shown him that he cannot crystallize his ideas, nor bring himself to act and place orders.

It has been stated some time ago that the men's wear market was taking on many of the characteristics of the women's wear field, and this appears to be even truer today than when it was first uttered. Mills which are solely men's wear organizations, might with profit consider some of the methods which have proved useful in the women's wear field. For one thing branded goods have gone further in the women's wear field than hitherto in men's wear, but it may be a fruitful thought that proper brand promotion might establish a keener fabric consciousness among men and effect the stabilization of business for those houses which were able to gain popularity for their brands.

An Authority Needed

The women's wear field has long had a form of government by absentee deity. That is to say the decrees of Paris have had the force of fashion laws and Paris served very well as an authority to quote. The men's wear field has no authority to quote which is recognized sufficiently generally to give power to fashion. Lacking authority, there is unnecessary uncertainty. If the men's wear field could point to the use of blue overcoats in such and such a place as marking definite acceptance, at least a fair amount of fall business in blues might be done in advance.

As a matter of fact after a period of slack trading, buyers are now beginning to come around and do more in coatings. They have had time for their thoughts to settle on certain types as assured a certain proportion of the season's business.

Quick turns and supplementary lines when needed, are two other characteristics of the women's wear field which the men's wear trade may have to adopt in self defence. If a style flunks in the middle of a season or if one flourishes unexpectedly, the selling organization and the mill must be flexible enough to adjust itself to the situation with the least lost motion and inconvenience to itself and its customers.

* * *

Overcoatings: Some sellers report a little more interest on the part of buyers. There is no general movement and the situation is still unsatisfactory and considerably behind a year ago at this time. The buyers who are placing orders are merely those few who have found that calm consideration of the market and its offerings has brought a little conviction out of bewilderment. Sellers believe that if a few more clothiers looked conditions straight in the face there would be greater enthusiasm and more buying. Wise merchants have for several seasons recommended late openings and after the present experience it is probably that the next fall season a year hence, will be opened in March or April if the present temper of the market persists. Chinchillas and whitneys are leaders.

* * *

Fancy Worsteds: Many more showings of fancy worsted suitings have been made, but the market remains spotty. Several organizations noted for their variety and quick turns on style matters, are receiving a plentitude of orders, while other mills find the trade uniformly dull. Fancy worsteds as a group will probably do a large business before the season is over. Mill men regret the close basis which has been necessary on prices, as little profit is to be seen in such prices unless it is possible through them to attain a full capacity production for a considerable period.

* * *

Women's Wear: Because garment makers and retailers do not know what they want, the women's wear fabric market remains dull. Style as usual is the prime element here, and distributors are waiting for indication as to what the consumer will favor for her last minute concentration. Until retailers get out more of their spring showings there is no compass by which to guide the ship. Fabric men argue that the Palm Beach season is the spring try-out, and that results there should be taken as authoritative of best fashion for spring and summer in more northern climes.

See Limit to Rising Cottons

Gains in Business Through Low Prices Might Be Negatived by Advance

HOW far any likely advance in price of cotton goods may go this year is a proposition which is interesting many on the market and in mill accounting rooms. Higher prices than those now ruling are expected in several branches of the field within a comparatively short time. That there are limitations is a fact acknowledged by many merchants. The movement of cotton goods was started by reason of their attractive cheapness, and it is not believed likely that they would hold so broad a field if prices advanced again to levels current during the first half of last year.

Cotton has recovered 2c per pound from bottom levels and many lines of goods are ½c per yard higher than they were in December. Further fractions are soon to be added to cotton goods prices according to the market outlook. For the time being they may slow down buyers' interest, but the statistical position of the market is such that strength is almost assured through the first half of the year. Sales have been running ahead of production and stocks are considerably under what they were a year ago.

Seek New Uses

The trade is making a strong effort to find new uses for cotton goods. The ruling price is often the vital factor in deciding the adaptability of cotton goods in a new field where something else is already giving satisfactory service. It would certainly be waste energy to uncover possible uses which held good only when prices were on a starvation level. Unless the cotton farmer can find economies to warrant continuation of a price around 12 or 13c, a number of the cruder uses for cottons would be possible only when mills were in a mood to make great sacrifices.

The finer uses for cottons, in the dress field for example, appear to several merchants to be the phase of the situation best worth cultivating. Not only are the margins possible to the mill greater on highly styled goods wider than on coarse staples, but the business is less susceptible to choking because of price fluctuations. Of course the shorter staple cottons must be utilized and the spinning and weaving machinery suitable only for coarse goods must be operating to have the industry generally in a state of prosperity. The ideal toward which all will want to work is sufficient orders to occupy all looms and to consume all grades and lengths of cotton. That is a difficult ideal to reach, and it is probably equally sound to give most encouragement for expansion to those mills making goods most likely to hold their market and thus prove the most reliable supporters of the stability of the entire industry.

* * *

Prints: Continued excellence of position remains the feature of all lines of printed goods. Wholesale distributors are said to be carrying only light stocks of standard lines of prints and prints have taken the leading place in spring wash goods departments. The last two months have probably witnessed the largest print business ever seen in a like period. Percales and the finer goods are sought.

* * *

Rayons: General improvement has been in progress in rayon combinations in the cotton goods field. The so-called rayon alpacas have been active sellers both in the gray and finished states. Rayon decorated dress fabrics are returning to popularity, and it is said that some of the previous objections to this sort of goods have been met and overcome.

* * *

Khakis: Advances of ½ to 1c per yard have been made in a number of sources on lines of khakis. The change reflects the tighter situation in the gray goods market and buyers' support of khakis.

* * *

Gray Goods: Business remains fairly general, in the gray goods market, but individual orders are smaller than they were a while back and they are now described as filling-in orders. Spot goods still command premiums over nearby deliveries. For example spot 64 x 60s sell at 7c, while April

Cotton Goods Quotations

	Mar. 2	Feb. 23	Mar. 3, 1926
Spot cotton, N. Y....	14.70¢	14.25¢	19.45¢
Print Cloths			
27- in., 64x60, 7.60..	4¾-5¢	4¾-5¼¢	5⅞¢
38½-in., 64x60, 5.35..	6⅞-7⅛¢	6¾-7¼¢	8¾¢
39- in., 68x72, 4.75..	7¾¢	7⅞-7¾¢	9¾-9⅞¢
39- in., 72x76, 4.25..	8⅞-9⅛¢	8¾-9¼¢	10¾-10⅞¢
39- in., 80x80, 4.00..	9¾-10¢	9¾-10¢	.2⅜-12¾¢
***Brown Sheetings**			
36- in., 56x60, 4.00..	7¾-8¢	7¾-8¢	10-10¾¢
36- in., 48x48, 3.00..	9-9½¢	9-9½¢	11¾-12¢
37- in., 48x48, 4.00..	7¾-7⅞¢	7¾-7⅞¢	9¼¢
Pajama Checks			
36½-in., 72x80, 4.70..	7¾-8¢	7¾-8¢	10-10½¢
36½-in., 64x60, 5.75..	6½-6⅝¢	6½-6⅝¢	8⅛-8¼¢
Miscellaneous			
Drills, 37-in., 3 yd....	10¢	10¢	12-12½¢
Denims, 2.20s.....	14-14½¢	14¢	*16½-17½¢
Tickings, 8oz.....	18-19¢	18-19¢	21½¢
Standard prints.....	8¢	8¢	9½¢
Eastern staple ginghams, 27-in.....	9¢	9¢	9¢

* Nominal

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The PHILADELPHIA METAL DRYING FORM COMPANY hereby gives notice that they are the sole owners and manufacturers of the well-known, hollow, internally heated, adjustable form, which is protected under the following U. S. Patents:

U. S. Patent 14374/1221394
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U. S. Patent 1292167; U. S. Serial No. 146682
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No one but the above firm can manufacture and sell forms of this type without infringement.

Contrary to stories circulated, we have no intention, now or at any future time, of permitting any other manufacturer in the United States or Canada to manufacture adjustable forms of the above description, and we intend, in defense of our patent rights, to vigorously prosecute any infringement, under the patent law which reads as follows:

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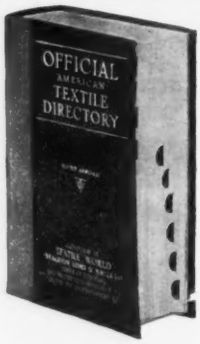

The Standard Reference Authority of the Textile Industry

The Official American Textile Directory has listed over 20,000 concerns. It is completely revised annually with reports on new mills and changes in established firms. This directory is a complete index to the textile industry.

What the Directory Contains

Part I—Complete Directory of Mills.
Includes Cotton, Woolen, Knitting, Silk, Flax and Jute mills in the United States, Canada and Mexico, together with Dyeing and Finishing Mills, Bleacheries and Print Works. Details are given with each mill as to names of officials, character of goods manufactured, machinery equipment, power used, whether equipped with a dye house or finishing plant, name of selling agent or if mills sell direct, also name of buyer and in most cases what they buy. List of Investment and Mill Securities Houses handling mill Stocks and Bonds.

Part II—Raw Material Section.
Complete lists of Dealers and Brokers in Wool, Cotton, Waste, Shoddies, Silk, Flocks and Rags.

Part III—Yarn Trade Index.
Classified lists of manufacturers of all kinds of yarns with sizes of yarns spun and form in which put up. Also contains lists of Yarn Dealers and Commission Merchants with kinds of yarns handled.

Part IV—Commission and Dyeing Section.
Lists and classifies the various mills doing dyeing, bleaching, finishing, printing, mercerizing and other classes of commission work.

Part V—Classified Lists of Cloth Manufacturers.
Classified according to kind of goods manufactured.

Part VI—Selling Agents.
Selling Agents, Converters, Dry Goods Commission Houses, Export Houses and Cotton Goods Brokers with kind of goods handled.

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BRAGDON, LORD & NAGLE CO.

Directory Dept.

334 Fourth Ave. New York, N. Y.

Fabrics—Continued

moves at 6⅞c. Broadcloths in the gray are still holding interest, particularly the carded varieties. Near deliveries are scarce, and though business has been passing for April, May and June are the more usual months. Sheetings are reported firm all along the line.

* * *

Denims: These goods, along with tickings and chambrays, are in a substantial position with orders well in hand for the second quarter of the year and some makes sold considerably beyond that. There is a feeling that an advance to 14½c on 2.20 denims will become the general thing in a short time. Already some are said to be considering only the advanced figure.

Silk Buyers Seek Low Prices

Retail Demand Is Large with Accent on Special Offerings—Crepe-de-Chines, Georgettes, and Satins Lead

THE broadsilk market while active in many spots, continued to give the impression of hot-house merchandising. In other words, the business is being forced by the two principal expedients of extremely close figuring of the profit element and the taking away of the quality element in order to bring goods of a particular sort within the range of buyers' ideas. Cheapening and substitution of lower-priced grades of raw silk are the methods used to bring a certain cloth down to buyers' ideas of price.

One other type of hot-house merchandising remains to be considered. This is of a more sensible and legitimate type, and consists of advertising and display aids to the stores to feature the manufacturers' goods at presumably special sales.

Business with the retail stores as a general rule appeared to be larger than heretofore, and expanding. The various cutting-up trades around New York are taking fairly large quantities but stoutly resist any advances due to the recent rise in raw silk and so far have been successful in forestalling any advance of consequence.

* * *

Georgette: The three-thread construction is most active but a growing inquiry is being noted for two-thread. Prices hold about the same to slightly higher with the most popular 80 x 80 number bringing $1.30 finished in most houses. The gray goods market moved up about a cent a yard and is now at 84 to 86c.

* * *

Satin crepe: Holds up surprisingly well according to many houses who had planned to run off their looms a month or more ago. Prices are on an unchanged basis, but manufacturers state that they are having a slightly easier time getting their price which constitutes something of a victory for them. Most of the goods is moving to the retail stores who state that it is getting to be a staple and sells independent of any seasons.

* * *

Crepe-de-Chine: Expanding volume of sales noted to all classes of customers. Price continues to be a major consideration and a number that sold during January at $1.55 still sells at that figure, although the manufacturer has nominally moved his price up to $1.57½. Low end numbers and Canton 3-thread construction finds big volume, but large stocks of goods prevent any advance as yet in the price.

* * *

Prints: Print houses comment on the excellent demand for the newer prints which constitute one of the brightest spots in the market today. There is no overproduction and on many lines manufacturers are sold up.

* * *

Silk Situation at a Glance.— PRODUCTION: Unchanged to declining slightly.

DEMAND: Large at close prices.

STOCKS: Smaller.

RAW SILK: Prices higher; stocks smaller.

SENTIMENT: Mills planning curtailment.

Burlaps Are Firmer

More Interest Shown in Spot and Nearby Goods

Although there has been no very active period of trading in the burlap market, there has been enough of a movement backed by strength in Calcutta to raise prices fractionally in the New York market. At mid-week most holders were asking 5 to 10 points higher than at the start of the week for their offerings.

Of the various positions there has been most interest in spot and nearby goods, and it is probably this condition which caused the market to work into a slightly higher position.

Prices on 10½ oz. 40s on the spot at mid-week were around 8.95c. Goods four weeks off were 15 to 20 points less and goods for March shipment from Calcutta were still lower by about the same margin. The Calcutta price was about 8.60c. On the light weight side of the market 8 oz. 40s are quoted at 6.60c on the spot and arrivals, and shipments are quoted about 5 points less.

BOSTON, MASS. The Congress Mills Co., 27 Kingston St., recently incorporated for $25,000, is a new corporation engaged in business as commission merchants. At the present time the new company is selling agent for the Schuylkill Plush Co., Manayunk (Phila.), Pa. Abraham S. Burg is president of Congress Mills Co.

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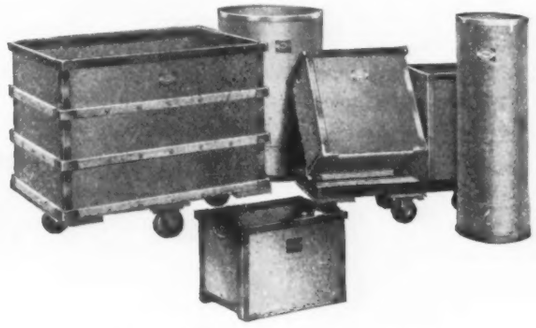

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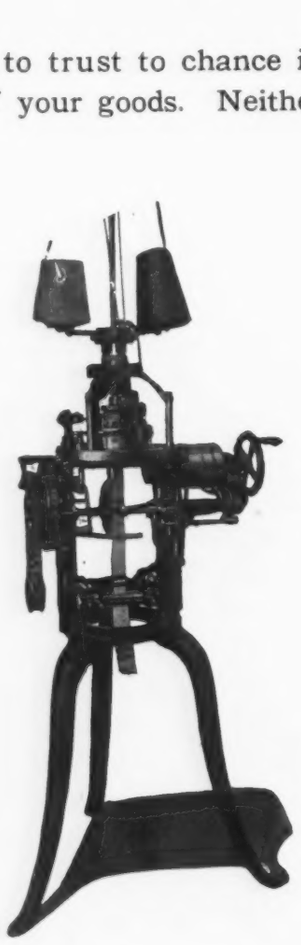

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FINANCIAL

South Fairly Active

GASTONIA, N. C., FEB. 26.—Trading in common stocks continued fairly active this week with gradually rising prices. The average for this week according to the weekly summary as furnished by R. S. Dickson & Co., Gastonia, N. C., showed a net advance of 24 points or 110.48 as compared with 110.24 for last week. Of the two Carolinas, the South Carolina common stocks showed the greatest gain, with trading fairly active. The preferred stock market continued fairly active with the demand and offerings changing very little.

New Bedford Quotations

(Quotations furnished by Sanford & Kelly)

	Bid	Asked
Acushmet Mills	83	85
Beacon Mfg. com.	125	...
Beacon Mfg. pfd.	...	95
Booth Mfg. Co., com.	95	100
Booth Mfg. Co., pfd.	92*	...
Bristol Mfg. Co.	...	120
Butler Mfg. Co.	51	53
City Mfg. Co.	90	93
Dartmouth Mfg. Co., com.	90	95
Dartmouth Mfg. Co., pfd.	80	...
Fairhaven Mills, pfd.	...	7½
Gosnold Mills, com.	8	...
Gosnold Mills, pfd.	20	...
Grinnell Mfg. Co.	66	...
Hathaway Mfg. Co.	104	108
Holmes Mfg. Co., com.	...	55
Holmes Mfg. Co., pfd.	50	...
Kilburn Mill	87½	...
Manomet Mills	9	10
Nashawena Mill	65½	67½
N. B. Cotton Mills, com.	100	...
N. B. Cotton Mills, pfd.	82½	...
Neild Mill	142½	...
Nonquitt Spng. Co.	32½	34
Pemaquid Mills	...	26
Pierce Mill	330	...
Potomska Mills	67	70
Quissett Mills Co., com.	...	89
Quissett Mills, pfd.	92	...
Sharp Mfg. Co., com.	6	8
Sharp Mfg. Co., pfd.	16	20
Soule Mill	142	...
Taber Mill	86	...
Wamsutta Mills	52	54
Whitman Mills	45	50

* Ex-dividend

New England Textile Stocks

(Quotations at "Public Sale" are based upon last sales at Boston public auction and Boston Stock Exchange. Bid and Asked prices are latest quotations of leading Boston dealers.)

	Public Sale	Bid	Asked
Am. Wool. pfd.	73⅝	...	...
Am. Mfg. pfd.	82¼	82	84
Amoskeag, com.	57½	...	...
Androscoggin	43½	43	45
Arlington	68¼	67	69
Bates	124½	122	126
Berkshire Cot.	...	124	127
Bigelow-Hfd, com.	...	...	...
Boott	...	...	106
Edwards	41	37	42
Esmond, pfd.	99⅝	98	...
Everett	10	10	13
Farr Alpaca	164¼	159	162
Great Falls	14¼	11	14
Hamilton Woolen	28	27	31
Hill	30	24	...
Ipswich, pfd.	87½	92	95
Ipswich, com.	38½	44	...
Lawrence	67¾	69	72
Ludlow Asso.	177¾	175	178
Lyman	114¼	108	112
Massachusetts	71	74	...
Merrimack, com.	123½	120	123
Nashua, com.	50⅛	49	51
Nashua, pfd.	93	92	94
Naumkeag	171½	174	178
N. E. So. pfd.	8	...	...
Otis Co.	19	19	21
Pacific	40	...	...
Pepperell	116⅝	117	119
Plymouth Cordage	127	125	128
Tremont & Suffolk	23¼	20	24
York	26	26	30

Rayon Stocks on N. Y. Curb

(Week ending March 1)

Stock	Sales	High	Low	Last
Courtaulds, Ltd.	800	27⅝	27⅝	27⅝
Industrial Rayon	7,300	8¼	7	7⅝
Snia Viscosa	300	9⅝	9⅝	9⅝
Snia Viscosa, Rcpts.	500	9⅝	9	9⅝
Tubize	1,100	204	190	200

More Business, But Little Profit

At Present Narrow Margins Large Earnings for First Six Months of Year Will Be Exceptional

BOSTON, March 2

NOW that we are getting well into the first six months of the year it is possible to forecast with some degree of certainty the probable average financial showing of textile mills at the end of this period. In the cotton branch of the industry, where the largest losses have been suffered during the last three years, there has been an encouraging increase in business volume, but within the memory of few leading members of the trade has so large a business been done at so little increase in price per pound and yard, or at such a narrow margin between cost and selling price.

Red Ink Figures Eliminated

While red ink figures have been eliminated by a majority of cloth mills and by many sales yarn spinners, the black ink figures are small in most instances, and unless there is a marked increase in the margins upon the balance of unsold production for this period, it will be futile to expect many mills to show earnings that would warrant resumption of dividends at rates prevailing three or four years ago. Many cloth mills have their product well sold into or through the summer months, and a few are sold well into the fall. Of these mills those making specialties, or those which own cotton at relatively cheap prices, will do better than the average; some who are able to run at or above normal capacity may find that wide distribution of overhead will give them a better profit than anticipated.

For those mills whose product is not sold far ahead, and particularly for sales yarn mills, results of the first six months may turn out better than seems possible at present. This statement is made upon the assumption that there will be no marked recession in yarn or cloth prices irrespective of what may happen to cotton values, and upon the fact that the well sold condition of the majority of cloth mills makes a strong foundation upon which to build more profitable prices.

Hand-to-mouth buying with manufacturers hungry for orders necessarily gives the buyer absolute control of the price situation. Hand-to-mouth buying with mills well sold ahead and in a comparatively independent position places the latter in a position to demand a premium price for the extra service rendered, and which involves carrying stocks or otherwise anticipating buyer's needs. It is the exact antithesis of the market situation that has existed for the last three years, and while potential production of staple cloths may be too large to give the manufacturer much of an advantage, it is practically certain to work to the advantage of producers of specialties.

Bearish Views Discounted

The heavy losses for the last fiscal year disclosed in statements published within the week by the American Woolen Co., New England Southern Mills, Manomet Mills, Nonquitt Mills, and Hill Mfg. Co., as well as the reduced earnings shown by Nashawena, Dartmouth Mfg. Co., and several others, have been largely discounted in their stock values, and in most instances, reports of fuller and more profitable operations since the first of the year have encouraged buying of certain of these stocks at current low values. The most discouraging feature in this connection was reported decision of Manomet directors to submit to stockholders their recommendation of liquidation. The continued heavy drainage of American Woolen Co.'s surplus account in order to pay preferred dividends was also unfavorably commented upon, despite the fact that the surplus remains large and more than required for working capital without outside financing. The fact that Nashawena and Dartmouth should have been able to suffer such heavy inventory markdowns and still show a balance on the right side of the ledger was in marked contrast to most other statements for the last fiscal year, and is particularly encouraging in view of the improved business since the opening of the new year.

Nashawena's Small Loss

For the year ended Dec. 31, 1926, Nashawena Mills, New Bedford, Mass,. showed a loss after all charges, excepting depreciation, of $16,067, which compares with a profit in 1925 of $587,987 after all charges. Payment of $495,000 in dividends and $7,850 in additional Federal taxes for previous years caused a reduction in surplus of $508,917, or to $1,034,802. Sales for the year aggregated 29,051,000 yards valued at $6,608,299, as compared with $7,249,271 in 1925, the yardage, however, being 6% greater than in 1925. At the annual meeting President William Whitman stated that there has been a marked increase in the company's business since the first of the year and that January and February sales were double those of the same two months of last year, these orders being sufficient for a ten weeks' production. The director's decision to make no charge for depreciation was because of their belief that heavy charges of former prosperous years had created a sufficient reserve, this aggregating $2,815,488 against the property account of $10,068,799.

Renfrew to Liquidate

The special meeting of stockholders of the Renfrew Mfg. Co., Adams, Mass., last week authorized the sale of all or any part of the plant and John T. McGuire, president of the Textile Banking Co., New York City, was appointed agent to study the mill's situation and to sell such parts of the property as seemed advisable. This decision was made necessary by the fact that banks and stockholders did not favor the issuing of debentures or bonds to the amount of $600,000 for the purchase of new machinery and providing of needed working capital. In addition to 7% notes aggregating $953,425 the Renfrew Co. has outstanding $400,000 of preferred stock and $1,292,500 of common stock.

N. E. Southern Mills Loss

The New England Southern Mills, for the fiscal year ended December 31, 1926, showed a loss after all cnarges of $1,032,672, which compared with a profit after all charges in 1925 of $211,929. A working capital deficit at the end of the 1925 fiscal year of $23,120 was increased during 1926 to $1,730,883, and included in the liabilities are $5,090,000 of bank loans. The company's income account for the last two years compares as follows:

	1926	1925
Gross sales	$13,319,867	$19,067,087
Mill prof. bef. chgs.	536,353	1,836,692
Depreciation	467,054	512,406
Current interest	355,542	307,851
Int. on term debt	586,304	714,849
Canadian inc. tax	.....	34,840
Inventory write down	276,299	.....
Deficit	1,158,746	*266,746
Add: earns of Cosmos Mills before sale	126,074	.....
Less: prof. on minority stock not owned	.....	54,817
Net loss	1,032,672	*211,929

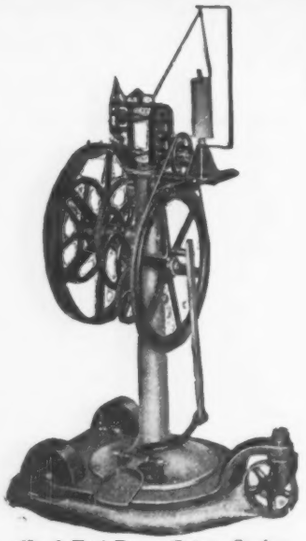
*Profit.

Manomet to Vote on Liquidation

Pursuant to a recommendation of the directors, the stockholders of the Manomet Mills, New Bedford, Mass., will hold a special meeting, Apr. 5, to vote on the question of liquidation. It was brought out at the annual meeting on Monday that the mills will be soon entirely closed and that in order to prevent receivership directors have provided cash to meet current obligations. At the close of the last fiscal year there was a net debt on the plant of approximately $1,000,000. At the annual meeting President William Whitman spoke in part as follows regarding conditions that led up to decision of directors to recommend liquidation:

"The corporation was very profitable until 1920. Earnings were large and dividends were paid regularly between 1906 and 1923. In 1919 sales were practically $20,000,000 and in the following year reached the maximum figure of $28,000,000.

"The year 1921 was followed by a radical



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An Exceptionally Efficient Machine

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Financial—Continued

disturbance which affected Manomet even more than other cotton mills. Sales declined steadily and by 1925 dropped to $4,000,000 for that year. This brought about forced reductions in operations and in 1923 the number 3 mill, constructed specially for the manufacture of tire fabrics, was shut down and later sold.

The company received encouraging orders in January, 1926, and it was decided to start the mill number 4 fully. The supposed improvement in business and outlook proved to be a spasm and the company found itself unable to secure orders even at a loss. Due to the conditions prevailing in 1926 directors were forced to the conclusion that the only course was to close the mill. The mills are now practically closed down and will soon be entirely closed. In order to prevent receivership directors have provided cash to meet the obligations of the company. The report of the treasurer for 1926 shows that the mill has a debt on its plant of about $1,000,000.

"Mr. Whitman called attention to the fact that the management of the mill has been the same since 1904. While admitting that mistakes of management have naturally been made, he stated that they were not the cause of the present condition of the corporation."

American Woolen to Show Loss

American Woolen Co. has declared the regularly quarterly preferred dividend of $1.75, payable Apr. 15 to stockholders of record Mar. 11. This action has been taken by the directors despite the fact that the report of operations for the fiscal year, 1926, which will be mailed to stockholders early next week, is expected to show an operating loss of around $2,000,000. The company's probable showing is commented upon by the *Boston News Bureau* as follows:

"The preliminary figures indicate an operating loss of over $2,000,000. To this, to obtain final results for 1926, must necessarily be added the normal depreciation of around $2,000,000. These approximate deficits for 1926 compare with gross profits of $3,051,000 and net profits of $944,000, respectively, before and after depreciation, in 1925.

"From a banking standpoint the 1926 report will appear good, for the company ended the year in the best financial condition in many years. Inventories were sharply reduced to the lowest aggregate in four years. Bank loans at $6,000,000 were the lowest since the culmination of the 1921 deflationary period and were, moreover, more than covered by about $7,000,000 cash.

"Notwithstanding the severe deficit of 1926, the resultant shrinkage in profit and loss surplus and the indifferent trade prospects of the current half-year, directors decided in view of the liquid financial condition and unbroken dividend record of the preferred stock to vote the regular 1¾% declaration for payment Apr. 15. As unearned dividends, however, obviously cannot indefinitely be met from surplus the company earnestly hopes for something approaching a trade revival this year to supplement its intensive manufacturing and selling efforts."

Dartmouth Reduced Profits

The Dartmouth Mfg. Co., New Bedford, Mass., for the fiscal year ended Dec. 31, 1926, reports a gross profit after inventory markdowns of $63,000. During the year the company paid dividends of $326,000 on preferred and common stock and bought in 4,000 shares of common. After payment of Federal taxes for the 1925 year, the surplus, depreciation and tax reserve aggregated $2,452,209 as compared with $2,939,160 at the end of the 1925 fiscal year.

Hill Mfg. Co. Loss

The Hill Mfg. Co., Lewiston, Me., reports a net loss after all charges for the year ended Dec. 24, 1926 of $161,765, which compares with a loss for the previous fiscal year of $87,430.

Boston Stock Auctions

The following sales of textile shares were made at Wednesday's auctions:

Shrs.	Mill	Par	Price	Change
18	Great Falls	100	14¼	+1¼
43	Arlington	100	68¼	— ¾
10	Nashawena	100	69½	+6¼
3	West Boylston, pfd.	100	44	—1
36	Pepperell	100	116⅝	+ ¼
25	Nonquitt Spinning	100	33½	— ½
21	American Mfg., com.	100	90-89	—11
25	Nashua, com.	100	50⅛	— ⅝
19	Plymouth Cordage	100	127	+17⅜
77	Naumkeag	100	172-171½	—1
2	Salmon Falls	100	22	+7½
18	Ludlow	...	178½-1⅜	+ ⅜
1	Essex	50	200	+ ⅜
298	Total.			

N. Carolina Textile Stocks

(Taken from list of Southern Mill Stocks quoted by R. S. Dickson & Co., Gastonia, N. C., and Greenville, S. C.)

	Bid	Asked
Acme Spinning Co.	110	115
Am. Yarn & Processing Co.	90	95
Arlington Cotton Mills	84	90
Arrow Mills	80	90
Cabarrus Cotton Mills	140	161
Cabarrus Cotton Mills 7% pfd.	109	...
Cannon Mfg. Co. (par $10)	17	19½
Chadwick-Hoskins Co. (par $25)	13	15
Chadwick-Hoskins Co., 8% pfd.	101	103
China Grove Cotton Mills	109	113
Clara Mfg. Co.	74	...
Climax Spinning Co.	123	130
Clover Mills	...	71
Crescent Spinning Co.	94	99
Dixon Mills	98	...
Durham Hosiery, 7% pfd.	44	50
Durham Hosiery "B"	6	12
Eastern Mfg. Co.	...	58
Erwin Cotton Mills Co.	112	120
Erwin Cotton Mills Co., 6% pfd.	100	103
Gibson Mfg. Co.	130	141
Globe Yarn Mills (N. C.)	50	55
Gray Mfg. Co.	...	85
Hanes, P. H. Knitting Co.	8	...
Hanes, P. H. Ktg. Co., 7% pfd.	100	103
Henrietta 7% pfd.	...	80
Imperial Yarn Mills	98	101
Jennings Cotton Mills	230	240
Linford Mills	102	105
Locke Cotton Mills Co.	...	110
Lola Mfg. Co.	...	45
Majestic Mfg. Co.	174	...
Mansfield Mills	118	130
Mooresville Cotton Mills	29	36
Mooresville Cotton Mills, 7% pfd.	...	85
Myers Mill	75	85
National Yarn Mill	100	110
Parkdale Mills	70	78
Perfection Spinning Co.	99	101
Ranlo Mfg. Co.	135	145
Rhyne-Houser Mfg. Co.	75	85
Roanoke Mills, 7½% 1st pfd.	99	101
Roanoke Mills, 8% 2nd pfd.	97	100
Rosemary, 7½% pfd.	98½	...
Rowan Cotton Mills Co.	90	95
Seminole Cotton Mills Co.	...	80
Sterling Spinning Co.	105	112
Stowe Spinning Co.	99	102
Victory Yarn Mills Co.	56	65
Winget Yarn Mills Co.	...	62
Wiscasset Mills Co.	200	...

Silk Stocks on N. Y. Exchange

(Week ending March 1, 1927)

1927 High	1927 Low	Stock	Sales	High	Low	Last
27¼	20⅝	Belding-Hemingway	1,700	25	23½	23⅝
15¼	10½	Century Ribbon	1,400	15¼	12	15
57¼	50	Julius Kayser	6,100	52¼	51	51
16	13	H. R. Mallinson	1,400	14	13	13⅛
14⅝	12	Van Raalte	1,200	12	12	12

DIVIDEND NOTICE

To the Stockholders of **Draper Corporation:** a dividend of $1.00 per share on no par value shares of Draper Corporation outstanding has been declared payable March 31st, 1927 to stockholders of record at close of business March 5, 1927.

B. H. BRISTOW DRAPER,
Treasurer

POWER

STEAM—WATER—ELECTRIC

A competent study of the requirements and possibilities in the generation, distribution and application of power for industrial service frequently discloses opportunity for improvements that not only effect important savings in power costs, but result in marked betterment of the general operating economy of the entire plant.

The success of this organization in obtaining results is based on a broad and intimate knowledge of power plant design, equipment, and the many special operating conditions existing in industrial plants.

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VALUATIONS FOR ACCOUNTING
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PURCHASE and SALE
CONSOLIDATIONS

See also CONSOLIDATED TEXTILE CATALOG

Production Costs

If you are an executive officer of a textile mill, cost of production has probably been given your first consideration. Favorable factors on lines of the Central of Georgia Railway in Georgia, Alabama and the Chattanooga District all combine to lower production costs. These factors include an ample supply of labor, plentiful and dependable hydro-electric power, and coal from nearby fields. In locating a new textile mill on Central of Georgia lines, you can count also on dependable railway transportation which will get your goods to the buyer promptly.

Low production costs combined with dependable railway transportation are worthy of your serious consideration. Write us for detailed information.

J. M. MALLORY, *General Industrial Agent*

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of every description for Weaving and Knitting

We specialize in Cotton Yarns for Export

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PHILADELPHIA CHICAGO
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Gassed and Ungassed Combed Cotton Yarns

Spun by

The Arkray Mills, Inc.

Yarns as fine as 120s gassed and ungassed for the weaving, knitting and electrical trade and as coarse as 16s for the thread industries are spun at this mill out of the finest selections of sakelaridis or peeler cotton. The modern system of spinning yarns at this mill and the high grade of cotton employed, enable us to supply a spinning unsurpassed by either domestic or imported yarns.

Quotations and samples promptly submitted

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ARLINGTON COTTON MILLS ARROW MILLS, INC.
MYRTLE MILLS, INC. FLINT MFG. CO.

Spinners Processing Co.

Ply Mercerized

The excellence of these yarns has built up a steady clientele among discerning knitters. Quality all the way through — uniformly spun yarns processed with modern equipment into mercerized yarns of notable lustre and dye effectiveness. Available in any form of put up — all counts.

Single Mercerized

Yarns of THE ELMORE COMPANY for exacting plaiting and splicing requirements. All counts — bleached, tinted, dyed.

Carded and Combed

The JOHNSTON YARNS have won a real reputation. Back of them is a corps of mills thoroughly attuned to one standard.

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Fast Delivery Service

Daily 128 package cars radiate from Chattanooga to all parts of the Country. This fast delivery obviates the need for carrying large stocks on hand, thus reducing carrying charges and cutting down overhead. This fast delivery service is another reason why users of Dixie Yarns have Certified Satisfaction.

DIXIE MERCERIZING CO.
Spinners and Processors
CHATTANOOGA
Tennessee

COTTON YARNS

Chattanooga Yarn Market Is Quieter

CHATTANOOGA, TENN.—Less activity in yarn is seen by a leading local broker. He stated that a smaller volume of business was booked by his company during the week ending on Feb. 26 than for any similar period within the last few weeks. He states that the market has been comparatively quiet although some business was booked.

During the week silk advanced 10c a pound and thrown silk is now being quoted on basis of $6.30. Cotton and mercerized prices remained firm. In carded cones, 10s are quoted at 26½ to 27c and 20s at 29 to 29½c. Mercerized 60s-2 is quoted at 79 to 81c, and at 56 to 59c for 26s; 80s are listed at $1.04 to $1.07. In combed singles, 18s are at 37 to 38c and 70s at 74 to 76c.

Change in Belmont Agent

With the expiration of their contract at the end of the month Harding, Tilton & Co. will cease to act as selling agents for the Belmont (N. C.) Processing Co. No announcement as to the latter company's future selling arrangements has been made public.

Are Dealers Buying Yarn?

Indications of Certain Houses Operating, but Not Likely to be General

INDICATIONS are that yarn houses are buying more or less yarn for their own account. Reports from the South are to the effect that certain important houses have taken on considerable stock and others are likely to follow suit. The raw material market has developed in such fashion as to lead the yarn dealer to change his opinion about owning yarn. During January and February dealers were not convinced in their own minds as to the stable character of raw material and felt that both cotton and yarn might go to lower levels. It is another illustration of the fact that buyers never buy at the bottom. They always wait for lower figures and in the meantime the market usually gets away from them. This is the case today, for the dealer could have owned yarn considerably under to-day's level if he had had courage to operate in January or even early February. But it usually takes an advance to bring buyers into the market and this is as true of dealers as it is of consumers.

Notwithstanding this reported activity of yarn houses it is not expected that buying of this character will be long continued or generally widespread. The number of houses in the selling markets which have abandoned or are decreasing merchandise operations is very considerable and it is not believed that for some time to come at least stocks in dealers' hands will be anything more than negligible. Dealers have had too many disastrous experiences in buying yarn to hold for a profit to cause them to repeat the procedure in any large way. To-day, in spite of certain unfounded reports to the contrary, stocks in sellers' hands are in very small compass and dealers declare they are not going to carry any more than they absolutely need for the filling-in orders which they receive from time to time.

Inquiries but Few Sales

The months of January and February have for the most part been favorable ones for the yarn dealer, especially in the volume of business done. The majority of these sales have been for current delivery and demand has been constant for quick shipment. This has not always been possible on account of the statistical position in which a good many mills have found themselves and the consequent complaints have been numerous. The buyer who buys for prompt delivery has in many cases allowed his stock to dwindle to lower proportions than is generally known and consequently when there is any delay in delivery he finds himself up against a serious proposition in keeping his plant running.

Buyers Not Operating Ahead

It is very evident a good many inquiries are being made by buyers, many of whom did not buy when cotton and yarn were at their low point and who are now trying to find out what to expect of the future. There were those who had the courage of their convictions and bought for a decided distance ahead. But it is the consensus of opinion that the number who have placed orders for even approximately their season's requirements is negligible. It is only natural that the buyer should be keeping in

Cotton Yarn Quotations

Carded—(Average Quality)

Double carded weav'g and knitt'g yarn 2c to 4c higher, according to size

Single Skeins or Tubes—(Warp Twist)

4s to 8s	—	—24½	20s	—	—28½
10s	24½	—25	24s	—	—30
12s	25	—25½	26s	—	—32
14s	25½	—26	30s	33	—34
16s	26	—26½	40s	—	—43

Two-Ply Skeins and Tubes

8s-2	—	—24½	26s-2	—	—32½
10s-2	—	—25	30s-2	—	—34½
12s-2	—	—25½	36s-2	—	—41
14s-2	—	—26½	40s-2	—	—43
16s-2	27	—27½	40s-2 High breakage	—	—44
20s-2	—	—28½	50s-2	—	—50
24s	31	—31½	60s-2	—	—56

Single Warps

10s	—	—25½	24s	31½	—32
12s	—	—26	26s	33	—33½
14s	—	—26½	30s	36	—37
16s	—	—27½	40s	—	—45
20s	—	—28½			

Two-ply Warps

8s-2	—	—25	24s-2	31½	—32
10s-2	—	—26	26s-2	—	—33
12s-2	26½	—27	30s-2	34½	—35
14s-2	27	—27½	40s-2 ordinary	43	—44
16s-2	27½	—28	50s-2	—	—51
20s-2	—	—29	60s-2	—	—57

8s-3 and 4-ply skeins and tubes; tinged, 21-22c; White, 24-24½c.

Hosiery Cones (Frame Spun)

8s	24	—24½	22s	28	—28½
10s	24½	—25	22s (silver and Jaeger)	—	—30
12s	25	—25½	24s	28½	—29
14s	25½	—26	26s	—	—30
16s	26	—26½	30s tying in	31½	—32
18s	26½	—27	30s extra quality	33½	—34½
20s	27½	—28	40s	42	—43

Combed Peeler—(Average Quality)

Warps, Skeins and Cones

20s-2	39	—40	50s-2	52	—54
30s-2	43	—44	60s-2	58	—62
36s-2	45	—46	70s-2	68	—73
40s-2	47	—48	80s-2	80	—83

Singles

12s	—	—34½	30s	43	—44
14s	—	—35	38s	45	—46
16s	—	—35½	40s	48	—49
18s	—	—36	50s	54	—55
20s	—	—37	60s	61	—63
24s	—	—40	70s	72	—75
28s	—	—42	80s	82	—85

Mercerized Cones—(Combed, Ungassed)

26s-2	56	—58	80s-2	1 05	—1 08
30s-2	58	—63			

Singles

36s-2	62	—64	30s	—	—84
40s-2	64	—66	40s	—	—87
45s-2	69	—71	50s	—	—92
50s-2	71	—74	60s	—	—1 02
60s-2	80	—83	70s	—	—1 14
70s-2	93	—96	80s	—	—1 52

Peeler—(Super Quality)

Single Cones

	Carded		Combed		Carded		Combed	
10s	29	—30	37	—39	26s	34	—35	44 —46
14s	30	—31	38	—40	30s	36	—38	47 —50
16s	30½	—31½	39	—41	36s	41	—43	50 —52
18s	31	—32	40	—42	40s	45	—47	53 —55
20s	31½	—32½	41	—43	50s	—	—	58 —60
24s	33	—34	43	—45	60s	—	—	68 —70

Combed Cones Warps and Tubes

20s-2	40	—42	40s-2	50	—55
24s-2	42	—44	50s-2	57	—62
28s-2	44	—46	60s-2	65	—70
30s-2	45	—48	70s-2	75	—80
36s-2	48	—50	80s-2	90	—95

Combed Reverse Twist Thread Yarns—Skeins, Tubes or Cones 2, 3, and 4-ply

	Peeler Average	Peeler Best	Sakelarides Average	Sakelarides Best
24s	50 —51	55—56	70	75 —
30s	— —53	58—59	73	78 —
36s	— —55	60—61	75	80 —
40s	— —60	65—66	80	85 —
45s	— —65	70—71	85	90 —
50s	— —70	75—76	90	95 —
60s	— —79	85—86	1 02	1 07 —

Quotations are average prices of the counts and qualities indicated at the close of business March 2. They do not cover lower or higher qualities unless specifically noted. For New York spot cotton prices, see page 131. For staple cotton prices, see page 133

ABERFOYLE MANUFACTURING COMPANY

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MILLS
CHESTER, PA.

Cotton Yarns—Continued

close touch with the situation, even though he will argue that the price of cotton and therefor of yarn cannot remain where it is. The argument of the buyer is that when reports regarding the acreage for this year become available it will be realized the reduction will be comparatively small and that the result of such knowledge will be depressing upon price. On the other hand it is realized no one knows what will happen to cotton and that a combination of lack of fertilizer and unfavorable climatic conditions will do much now to lessen this year's crop than any reduction in acreage which may not, as many predict, be great.

Prices Firmer

There is every reason for the spinner to take a firmer attitude on price than he has, owing to the upward trend of raw cotton and from business now on his books. Prices which have prevailed have not allowed the spinner to make even a fair profit and with increases in his raw material costs he feels it incumbent to secure more for his product if he is to come out whole. It is not enough for him to remain firm on the level at which he has been holding, but he appreciates he must have a better basis if he is to sell on replacement cost. Also the spinner believes buyers will increase their forward operations when they are once convinced that prices are not going to decline. This is another reason for holding for better figures. He does not see any likelihood of any dangerous accumulations, even if he should refuse to meet the buyer on his present level. He has not stock on hand today and can stand a fairly long period of quiet without reaching the point when it is necessary for him to search for business or to make prices which would enable him to secure it. He also knows that certain buyers have had sufficient confidence in the situation to buy ahead for a considerable period and predicts that others will follow this lead of important factors sooner or later. All these conditions combine to cause general reluctance on the part of spinners generally to part with their product at anything below the figure which they feel they can eventually obtain.

Buyers' Product Moves Slowly

Another reason for the consumer taking a conservative attitude toward the market and one which causes him to refrain from operating ahead is the comparatively small success he has had with his own business. Of course, conditions differ in different trades, but it is apparent that a good many buyers are basing their purchases of yarn on the sale of their product. They claim that if they had orders they would buy yarn to make them, but until they secure this business they are not interested at any price. This seems to apply particularly to the knit underwear trade. In New York state it is believed the sale of fall merchandise has been far from satisfactory and the prices which it has been necessary to make in competition with southern lines do not make it feasible to buy yarn at present levels and expect to make a living profit. There are a few knitters who have provided for a very fair proportion of their season's requirements at a level considerably lower than that of to-day, but there are a good many others—and these, it is believed, comprise the large bulk of the industry—who are looking at the market as impossible for them in the light of what their competitors have done. They feel the only thing for them to do is to wait in the hope that they may witness a more favorable basis for operations in the near future.

Fine Yarn Difficulties

Spinners of combed yarns are being compelled to pay an increasing amount for the cotton they employ. The price for 1¼ inch staple is disproportionately high to middling cotton and yet the buyer bases his ideas on the open price for middling and cannot understand why there should be such a disparity. Also it is claimed cheap offerings are being made in certain quarters of yarn that in all probability is not up to quality but on which the buyer is taking a chance of using without interfering with the quality of his product. These purchases are used as an argument to bear the dealer who is selling a first quality yarn sometimes with the desired effect.

Japanese Gain in Rumanian Gray Cloth Market

Textiles have long constituted the most important group of imports into Rumania, and among textile imports, cotton sheetings have always held an important place, according to a report from Consul J. Rives Child, Bucharest, made public by the Department of Commerce. Despite the development of a local industry, imports of cotton sheetings have shown a steady increase from year to year. In 1914, Rumania imported 1,305,000 lbs. of gray or unbleached cotton cloth valued at $356,000. In 1925, imports of this commodity amounted to 8,391,000 lbs. worth $3,860,000. In 1921 and 1922 the United States was the principal source of the Rumanian imports of gray sheetings, but has since been displaced in this trade by Japan, Czechoslovakia, and other European countries. Japan is now the leading source for these imports, much of its gain having been made at the expense of American goods.

*VANCOUVER, WASH. W. P. Lord, head of the Pacific Coast Linen Mills Co. which is working to establish a linen mill at Vancouver, has asked the industrial and state development committees of the local Chamber of Commerce to aid his company in a campaign to induce Western Washington farmers to grow flax, pointing out that at least 6,000 acres a year must be planted to keep the mill operating at capacity.

GROVES MILLS, Inc.
SUPER QUALITY
COTTON YARNS
COMBED PEELER, 24s to 80s, single and plies
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Samples and quotations promptly furnished
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SWIFT SPINNING MILLS
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Whites, Stock, Dyed and Heathers
Cotton Yarns of Quality
ALL of COLUMBUS, GA.
FROM MILL DIRECT TO CONSUMER

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12s to 32s Cones, Full Double Carded
10s to 20s, Single and Ply

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Superior Quality Knitting Yarns
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GATE CITY COTTON MILLS
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WHITE KNITTING YARN on CONES
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COTTON PRODUCTS COMPANY

Bankers Trust Building, Philadelphia, Pa.

Selling Agents for

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Tryon, N. C.

Single Mercerized Yarns

A. M. SMYRE MFG. CO.
Gastonia, N. C.

Combed Peeler Yarns
30's to 70's

Weaving and Knitting

TUCKASEGEE SPINNING CO.
Mount Holly, N. C.

TUCKASEGEE SPINNING CO. INC. MOUNT HOLLY N. C.

48s All Plies and Descriptions

The high and uniform quality of these yarns is a result of eternal vigilance in every step from raw material to finished yarn.

Samples and prices cheerfully furnished.

H. A. James

SELLING THE OUTPUT OF OVER 150000 COMBED YARN SPINDLES IN N.C.
GEN. SALES MGR.
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BELMONT YARNS

ALL COUNTS UP TO 100'S
Single and Ply

MERCERIZED
DYED
BLEACHED
AIR DRIED

A Complete Range

To have a ready source of quality processed yarns in every count and every form is an asset. At any rate, users of Belmont Yarns are of that opinion.

Belmont Yarn service is complete. What are your requirements? Write for samples.

BELMONT PROCESSING COMPANY
(LINEBERGER-STOWE MILLS)
BELMONT, N. C.

BELMONT YARNS

CONES COPS TUBES WARPS SKEINS

Cotton Yarns—Continued

Market Shows Stability

Yarn Shipments Reported Heavy—Some Business Said To Be Placed for Ninety Days

PHILADELPHIA.

WITH the prices of standard counts of cotton yarns approximately 2% over those prevailing at the beginning of the year, this market approaches the closing month of the first quarter with an appearance of stability. Day-to-day trading shows fractional fluctuations and indicated recurrent weakness, especially in carded qualities, have been largely of local nature, dependent entirely upon stock and supply conditions peculiar to individual dealers.

There is a possibility that the new month will be marked by some jockeying for control, to some extent, of the trend of prices. Considerable direct business has been placed for delivery over the next ninety days, and not many spinners are willing to concede a half cent below asking prices for less contract time than May. An interesting order for about 5,000 lbs. a week might bring a favorable reply from a spinner, but the chances of getting anything for prompt delivery at less than asking prices are very small.

Stocks Light Here

Consumers of cotton yarns are moderately active in this territory, operations running close to 80% of capacity on the average, with the minimum about 65%. Stocks are not burdensome, and considerably lighter than at this time last year.

A closer view of the situation than the foregoing gives the appearance of extreme dullness, however. For the week, aggregate orders in the larger houses show little variation from the previous week, but a number of minor dealers have been extremely quiet. Activity in both weaving and knitting yarns has been sporadic and irregular in volume movement, following to a great extent the index of the raw cotton market. Dealers are receiving yarns purchased around the Christmas holidays, and are finding a trifle more than the commission rate in the spot sales, although more "selling" is required.

Yarn Shipments Heavy

Reports from carriers, the railroads and steamship lines operating from the South, indicate a heavy movement of yarns to this section of the country. Whether or not the yarns stay in Philadelphia is not known, but the records of loadings show a steadily higher trend, with February one of the largest months since 1924.

Active Cotton Spindles

WASHINGTON, D. C.—The Department of Commerce announces that according to preliminary figures 37,373,902 cotton spinning spindles were in place in the United States on Jan. 31, 1927, of which 32,633,550 were operated at some time during the month, compared with 32,496,250 for December, 32,586,770 for November, 32,592,806 for October, 32,134,682 for September, 31,321,936 for August, and 32,810,308 for January, 1926. The total number of cotton spinning spindles in place, the number active, the number of active spindle hours and the average spindle hours per spindle in place by States, are shown in the following statement:

State	Spinning spindles (in thousands)		Active spindle hours for Jan.	
	In place Jan. 31	Active during Jan.	Total	Average per spindle in place
U. S.....	37,373	32,633	8,558,066,401	229
Cotton-grow'g	18,016	17,482	5,507,425,034	306
New England.	17,658	13,664	2,740,101,446	155
All other.....	1,698	1,486	310,539,921	183
Ala.....	1,506	1,451	424,083,696	282
Conn.....	1,192	1,039	212,967,307	179
Ga.....	2,953	2,842	838,554,964	284
Me.....	1,130	938	178,948,988	158
Mass.....	11,259	8,429	1,672,480,921	149
N. H.....	1,421	1,024	227,279,774	160
N. J.....	415	386	66,837,538	161
N. Y.....	870	718	155,319,506	178
N. C.....	6,109	5,923	1,952,282,179	320
Penn.....	123	110	22,160,537	180
R. I.....	2,506	2,089	417,604,078	166
S. C.....	5,366	5,329	1,783,841,854	332
Tenn.....	575	565	167,333,743	291
Texas.....	264	240	75,519,156	286
Va.....	711	690	155,312,657	218
All other...	962	853	207,539,503	216

Advances Check Demand

Affects Combed and Mercerized as Well as Carded Yarns

BOSTON.—Vetoing of the McNary-Haugen bill did not cause the decline in raw cotton prices that was quite generally anticipated, but the advance that has occurred since then has only served to strengthen the conviction of most members of the trade that a reaction is due and inevitable. This is only a partial explanation of the decreased demand from yarn users, for despite a moderate advance in yarn prices during the last few weeks they are more unprofitable for spinners than they were prior to the upward trend of cotton values.

There are few buyers of sales yarns who are not getting more business and a little better prices for their products, but their profit margins are not wide enough to allow them to abandon a most cautious character of buying, and the principal reason why they continue a hand-to-mouth policy in their yarn buying is because of the ease with which they can obtain prompt deliveries and because of the evidence that the potential supply of most counts and varieties of yarn is in excess of demand.

The improvement in demand for combed and mercerized yarns that was noted last week has largely disappeared and although there are few sellers at the low prices ruling two

CANNON YARNS

Cotton Yarns of Quality

Quality:—We invite inquiries from the Knitter who puts *Quality* above *Price*—Who is proud of his product and guards it jealously. *Cannon Yarns* are dependable—The same high quality is maintained year after year.

The yarn is the product of our own mills, and back of every pound is the guarantee of

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From Spinner Direct to Manufacturer
PHILADELPHIA

New York Providence Boston
Reading, Pa. Chicago Utica, N. Y.
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THE STANDARD OF VALUE & QUALITY

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MERCERIZED
YARNS
Spindale
N.C.

Single Yarns

MERCERIZED

Licensed Manufacturer
TINTED YARNS

Bleached, Dyed, Mercerized
and Glazed Sewing Threads.

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Spindale, N. C.

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CANADIAN REPRESENTATIVE
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NATIONAL YARNS

Uniform Dyeing

The colored yarns processed by National stand up under the closest scrutiny. Evenness and penetration are all that can be desired. Incidentally these yarns are dyed in a modern plant with modern equipment, which accounts for a lot.

NATIONAL
YARN & PROCESSING CO.
Quality Mercerized, Dyed and Bleached Yarns
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CONES COPS TUBES SKEINS WARPS
MILLS - ROSSVILLE, GA.

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308 Chestnut St.

Export Department
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Chattanooga, Tenn.
Fall River, Mass.
O. S. Hawes & Bro.

Charlotte, N. C.
Cosby & Thomas,
Johnston Building
Reading, Pa.
Edward Shultz,
712 North 5th St.

Quality Spinning and Mercerizing

Best mercerizing results are obtained on combed yarns spun from carefully selected cotton, under efficient supervision, in modern mills.

STANDARD MERCERIZED YARNS reflect these characteristics.

STANDARD - COOSA - THATCHER CO.
Chattanooga, Tenn.
Sales Office Lafayette Bldg., Philadelphia
Canadian Representative
Wm. B. Stewart & Sons, Ltd., Toronto, Montreal

Standard
Mercerized Yarn

McCONNEL & Co., Ltd.

MANCHESTER, ENGLAND

Spinners and Doublers of Fine Cotton Yarns, especially adapted for the making of Laces, Curtains, Voile, Fine Hosiery, Dress Goods, Gloves and for insulating wires.

Representative for U. S.

F. C. CHAMBERS

3750 L. Street, Philadelphia, Pa.

Cotton Yarns—Continued

weeks ago, most of the small business placed this week has been done on a basis about mid-way between old prices and asking prices. For instance, southern spinners who were holding for a basis of 37c for 18s combed peeler cones last week have taken business at 36½c; spinners who were asking 62c for 60s-2 beam warps have accepted 61c, and some who were asking 78c for 60s-2 mercerized have accepted 77c. Quotations on eastern combed yarns are unchanged, but are relatively firmer than those of southern spinners.

The two outstanding features of the market on medium and coarse count carded yarns are the complaints from buyers regarding poor quality of deliveries, and complaints from dealers regarding failure of spinners selling direct to maintain recent advances. Incidentally there are renewed rumors of commission cutting by certain dealers in their efforts to stimulate demand and to meet competition of spinners selling direct.

Spinnable Wastes Strong

Best Quality Materials in Better Demand at Firm Prices

BOSTON.—Last week was a little more encouraging to members of the Cotton Waste Exchange. Houses with contracts for good comber seem to have little to worry about as they find a sufficient call at strong prices to take care of whatever material they have arriving to their account on contract. The best peeler comber seems established at 12½c a lb. which is practically 88% of spot market for cotton. Good Sak. comber is running the peeler very close and in choice lots is quoted at 12c. Other good spinnable materials are in fair demand. On the other hand there is business appearing in the lower grade strips on a 6-8c basis. Threads are strong and there is a little more doing in white cop which is firm at 9½c. Bedding stocks are moving slowly but prices are inclined to strengthen.

The situation is generally more favorable. Scarcity of good wastes at one end and better prices at the low end owing to increased demand and lessened competition from linters inclines traders to take a more hopeful view of the outlook for the next few months. Dealers it is said are willing to pay as high at 12½c for choice comber to cover themselves, but whether this means a loss to them or that they are able to get a higher price from consumers is a question difficult to determine. Choice comber is very scarce. There can be no doubt as to that and selling of this waste on the assumption that such short sales can be covered later is a rather risky proposition. Egyptian wastes remain firm. Peeler and average strips are moving more freely.

The present high value of waste compared with cotton has in the Manchester market resulted in greater care being taken in separation and grading at the mills. Cotton waste supplies have been restricted recently in proportion to the semi-controlled supply of yarn, the result being that cotton waste generally has now a higher value than usual compared with cotton. Manchester cotton waste dealers offer their different lots on an average sample showing the relative amount of low and better quality material in the bulk. In the Boston market there has been fair inquiry regarding comber for export.

Current Quotations

Peeler comber	12	—12½c.
Peeler strips	10	—11c.
Egyptian comber	10	—10½c.
Choice willowed fly	4	— 5c.
Choice willowed picker	3	— 4c.
Sak. strips	13	—14c.
Linters (mill run)	4	— 4½c.
Spoolers (single)	8½	— 9½c.
Fine White cop	9	— 9½c.

New Waste Firm Formed

Charter of incorporation has been granted to a company called Union Waste Co., to manufacture, reclaim, process all kinds of waste, capital being $75,000. William Hellman, treasurer, 1433 N. 16th St., E. M. Logan, 41st & Westminster Ave., and C. C. Wilson, 4939 Morris St., all of Philadelphia, are those mentioned in the application.

Knight Corp. Wins Exclusive Right to "Fruit of the Loom"

A consent decree approved by Judge Bondy has been filed in the U. S. District Court in the suit filed last year by B. B. & R. Knight Corp., against Bloomingdale Bros., Inc., and Seham, Inc., over "Fruit of the Loom" trademark. The decree adjudges the plaintiff to be the sole and exclusive owner of said trademark. It further adjudges the defendants to have infringed on the plaintiff's exclusive rights and to have been guilty of unfair competition in selling and offering for sale women's uniforms or Hoover aprons bearing labels "Made of 'Fruit of the Loom'" which were not manufactured by the plaintiff or its licensees.

The decree perpetually enjoins the defendant from selling or offering for sale as "Fruit of the Loom" any garments except those of plaintiff or its licensees or from use of the trademark in any form in advertising garments other than those of plaintiff or its licensees. The decree also provides that the defendants may offer for sale and sell garments which are not manufactured by the plaintiff or its licensees, but when so doing must make the following representations: "This is not a genuine 'Fruit of the Loom' garment. It is not made or guaranteed by B. B. & R. Knight Corp., or by any authorized licensee of B. B. & R. Knight Corp., the owner of such trade-mark. This is a garment made, however, of genuine 'Fruit of the Loom' manufactured for or by (insert name of manufacturer), manufacturer of said garment. It is not guaranteed by B. B. & R. Knight Corp."

J. B. JAMIESON COMPANY
COTTON YARNS
77 SUMMER ST. BOSTON, MASS.

O. S. HAWES & BRO.
FALL RIVER, MASS.
COTTON YARNS ALL FORMS AND NUMBERS

INDUSTRIAL YARN CORPORATION
Weaving—COTTON YARNS—Knitting
88 LEONARD STREET, NEW YORK

COTTON YARNS PLUS SERVICE
ANY COUNT OR VARIETY
EASTERN OR SOUTHERN
GREY OR PROCESSED
Advice Based on Our Experience of Thirty Years in Bleaching, Dyeing, Mercerizing, Etc., at Your Service
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COTTON WARPS
DANA WARP MILLS Westbrook, Maine
Cotton Yarn and Warps, Carded and Combed
WHITE and COLORED SINGLE and PLY SELL DIRECT

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JESSIE P. EDDY, Treas.
Cotton and Worsted Yarns
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COTTON YARNS
Carded and Combed—Gassed and Ungassed

MONUMENT MILLS, Housatonic, Mass.
HIGH GRADE COTTON YARNS, White, Colors, Bleached
On Beams, Jack Spools, Cones, Skeins and Chain Warps
FAST-BLACKS & COLORS { For Woolen Mills a Specialty } WE SELL DIRECT

JOHN F. STREET & CO.
COTTON YARNS
CHICAGO 201 Industrial Trust Bldg., PROVIDENCE, R. I. PHILADELPHIA NEW YORK

EWING-THOMAS CONVERTING CO.
Specialists in Mercerized Yarns CHESTER, PA.
Warp Mercerizing for the Trade
Gassed—Natural—Bleached—Colors
DOUBLE MERCERIZED SPECIAL PROCESS

Established 1870 Incorporated 1890

Get Repeat Orders by Using

Crane Spring and Latch Needle Knitting Machinery

SOME CRANE FEATURES

Patent removable hardened Wing Burr Wheels.
Patent Thread Stop Motion can be fitted to 20 in. and 32 in. frames and are specially adapted for making fine Jersey Cloth and Stockinet.
Our flat machine is adapted for knitting collarettes.

SPRING NEEDLE UNDERWEAR MACHINE WITH AUTOMATIC TAKE-UP

This machine is made in sizes from 13" to 26" in diameter of any desired gauge, the number of feeds depending on the size of cylinders. Also built in sizes from 2½" to 32" in diameter for the production of a great variety of fabrics.
Aside from the feeds for plain fabrics, the stockinet, elderdown and astrachan feeds are superior to any on the market.

IMPROVED AUTOMATIC COLORED PLAIN STRIPER

Made in sizes from 7⅝" to 20⅝" inclusive, of any desired gauge; these measurements being back to back of cylinder needles.
The fabrics from this machine are used for bathing suits, theatricals and athletic goods.
These machines are second to none on the market.
The Crawford stop-motion is applied when requested.

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CRANE MANUFACTURING CO., Lakeport, N. H.

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CARDED-COMBED-MERCERIZED

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ALL COUNTS AND DESCRIPTIONS FOR THE KNITTING-WEAVING-CONVERTING TRADE

REPRESENTING DIXIE MERCERIZING CO. CHATTANOOGA, TENN. LUSTRE QUALITY

CONTROLLED MANUFACTURE IN NORTH CAROLINA

The Halliwell Company

Dyers, Bleachers and Mercerizers of Cotton Yarns in Warps or Skeins

High Class Mercerizing in warps Only — Fast Colors A Specialty

A new plant, latest and most modern machinery and equipment, backed by thirty-five years of specialized experience, guarantees service and satisfaction.

The Halliwell Company

PAWTUCKET, RHODE ISLAND

Woolmix

The Yarn of Adaptability

THOMAS HENRY & SONS INC.

NASHVILLE — TENNESSEE

Makers of Yarn Since 1884

QUALITY FIRST

American Thread Company

YARNS

James Austin & Son

260 West Broadway, New York

Selling Agents

SOLWAY DYEING & TEXTILE CO.

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Dyers, Bleachers and Mercerizers of Cotton Yarns, Warps or Skeins

ABSOLUTELY FAST COLORS

THE J. R. MONTGOMERY CO. WINDSOR LOCKS, CONN.

Manufacturers of

MERCERIZED COTTON YARNS Give the high Silk-like lustre In Knit Goods and Woven Fabrics

NOVELTY YARNS Poucle, Bourette and Spirals in Cotton, Wool, Worsted, Mohair and Silk.

COTTON WARPS On Beams, Jacks, Spools and Tubes In Fancy Twist, Colors and Printed.

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Selling Agents for

LILY MILL & POWER CO.
Combed Rev. Thrd. 24s to 50s

MELVILLE MFG. CO.
Carded 26s to 30s

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Combed 50s to 60s

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H. C. TOWNSEND COT. MILLS
8s Carpet Yarn

ROYALL COTTON MILLS
Carded 20s

MULTIPLE END ELECTRICAL TUBES
Combed & Carded 40s to 120s

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PROMPT SERVICE
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THAT WORK ABSOLUTELY SMOOTH

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1825 E. Boston Ave., Philadelphia, Pa.

LINEN YARNS for Hosiery Weaving and Twisting

Jute, Hemp and Ramie Yarns
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Established 1874 Manufacturers of all kinds of

Spring Knitting Needles

Slides, Sinkers, Jacks, Etc.

NEW BRUNSWICK, N. J.

COTTON

Cotton Higher On Trade Buying

Offerings Increase as Prices Reach 15c Level for December Contracts

THE persistency of the trade demand and gradual stiffening of the southern spot markets noted during January and February, have been reflected by increasing activity and strength in the futures market during the past month. Buyers who had been holding off in the hope of the approach of the planting season would bring out increased offerings of spot cotton in the South, evidently came into the market when the veto of the McNary-Haugen bill failed to cause any selling pressure. Covering as well as price fixing by the trade was active on the advance which followed, and prices made new high ground for the movement on Wednesday morning. May sold up to 14.70, making a recovery of 268 points from the low level of Dec. 4, while December touched the 15c. level. These prices attracted some hedge selling and a good deal of realizing, while reactionary sentiment was rather more in evidence toward the end of the week. On the whole, however, there has been a broadening of interest based on a belief that the world's consumption is going to be considerably in excess of earlier estimates and the uncertainty of the coming crop combined with the fact that in spite of recoveries, the price of cotton is still low compared with that of many other commodities.

More emphasis is being laid upon the increased use of low grade cotton. No doubt the demand for low grades has been very materially increased by the substitution of them for East Indian and Chinese cotton. A cable received here from Osaka on Wednesday, for instance, said that the lowest grade of East Indian was selling at a price equal to about American low middling and predicted that consumption of American cotton in China and Japan this season would aggregate 2,000,000 bales. It is understood that about 200,000 bales of American cotton have been bought by Bombay mills, while it is also believed that a good deal of American cotton is being substituted for East Indian. Aside from this, however, there has been increased use of low grades by users of American cotton, and it is now being pointed out, that as these spin to greater waste, the greatly increased consumption of them may be sufficient to affect the statistical position. The preliminary final report of the Census Bureau on ginnings for the season is due March 31 and that, of course, will give a more definite basis for calculations of the probable carryover. The general impression, however, appears to be that the figures on total ginnings are not likely to exceed 18,000,000 bales, while there are some recognized authorities in the trade who believe that world's consumption of American lint will aggregate 15¼ to 15½ million bales.

The following table shows Wednesday's closing quotations in the leading spot markets of the country, with the usual comparisons:

Market	Feb. 23	Mar. 2	Chge.	Let. Yr.	Sales
Galveston	13.90	.....	....	18.80	6,421
New Orleans	13.97	14.55	+58	18.38	29,491
Mobile	13.40	13.80	+40	17.75	654
Savannah	13.81	14.48	+67	18.32	2,639
Norfolk	13.88	14.31	+43	18.56	4,571
New York	14.25	14.70	+45	19.45	15,940
Augusta	13.56	14.25	+29	18.19	5,927
Memphis	13.25	13.75	+50	18.50	42,325
St. Louis	12.75	13.25	+50	19.00	.....
Houston	13.90	.....	....	18.75	27,469
Dallas	13.15	.....	....	18.30	53,819

The following differences on the off middlings are given as compiled from the reports received by the New York Cotton Exchange. The cotton grades marked ** are not delivered on contract.

	Dallas	Memphis	Montgomery	Augusta	Average
WHITE GRADES					
M. F.	1.25†	1.25†	1.05†	.83†	1.14†
S. G. M.	1.00†	1.00†	.90†	.68†	.90†
G. M.	.75†	.75†	.75†	.53†	.66†
S. M.	.50†	.50†	.50†	.38†	.44†
S. L. M.	1.25*	1.50*	1.25*	1.25*	.96*
L. M.	3.25*	3.50*	3.50*	3.00*	2.38*
S. G. O.**	5.25*	6.00*	5.50*	4.50*	3.55*
G. O.	6.50*	7.50*	7.00*	6.00*	4.98*
YELLOW TINGED					
G. M.	.75*	1.00*	.50*	.50*	.71*
S. M.	1.00*	1.50*	1.00*	1.00*	1.16*
M.**	2.50*	3.00*	2.50*	2.50*	2.53*
S. L. M. **	4.00*	4.50*	4.00*	4.00*	3.75*
L. M.**	6.00*	6.50*	5.50*	5.50*	5.22*
YELLOW STAINED					
G. M.	2.25*	3.00*	2.00*	2.00*	2.25*
S. M.**	2.75*	3.50*	2.50*	2.50*	2.78*
M.**	4.00*	4.00*	3.25*	3.25*	3.52*
BLUE STAINED					
G. M.*	2.50*	3.00*	2.00*	2.00*	2 18*
S. M.**	3.00*	3.50*	2.75*	2.75*	2.88*
M.**	4.00*	4.00*	3.75*	3.75*	3 75*

* Off middling.

Cotton Statistical Data
(Fluctuations of Futures)

	Closed Feb. 24	For week High	For week Low	Closed Mar. 2	Net Change
March	13.90	14.68	13.84	14.39	+.49
April	13.97	14.68	13.97	14.43	+.46
May	14.05	14.70	13.97	14.50	+.45
June	14.14	14.57	14.14	14.57	+.43
July	14.25	14.79	14.16	14.66	+.41
August	14.35	14.88	14.35	14.74	+.39
September	14.46	14.73	14.50	14.73	+.37
October	14.48	14.91	14.39	14.79	+.31
November	14.55	14.83	14.55	14.83	+.28
December	14.66	15.01	14.60	14.91	+.25
January	14.68	15.02	14.65	14.96	+.28

Spot Fluctuations for Week
(Middling)

	New York	N. Orleans	Liverpool
Friday, Feb. 25	14.30c	14.06c	.....
Saturday, Feb. 26	14.40c	14.13c	.....
Monday, Feb. 28	14.50c	14.21c	.....
Tuesday, March 1	14.85c	Holiday	7.85d
Wednesday, March 2	14.70c	14.55c	8.00d
Thursday, March 3	14.65c	14.48c	7.93d

Spot Fluctuations and Stocks

	Prices March 2	Stocks This week	Stocks Last year
Galveston	.....	589,317	538,842
New Orleans	14.55	641,908	401,698
Mobile	13.80	5,873	19,146
Savannah	14.48	80,514	69,036
Norfolk	14.31	110,957	123,810
New York	14.70	225,451	39,811
Houston	.....	855,603	668,424
Augusta	14.25	106,103	95,220
Memphis	13.75	260,073	296,231
St. Louis	13.25	9,215	15,737
Little Rock	13.90	53,434	61,231

That Count and Twist May be Precise—

The sun never sets on *vigilance* here at Quissett. You see it on every hand from raw cotton through to various stages of processing. It is one of the ingredients that make Quissett Yarns outstanding yarns. Such alertness insures your getting the count and twist you order.

The New Bedford operatives who work these yarns are craftsmen at their trade. They take pride in their product and never let down the barriers for laxness to creep in.

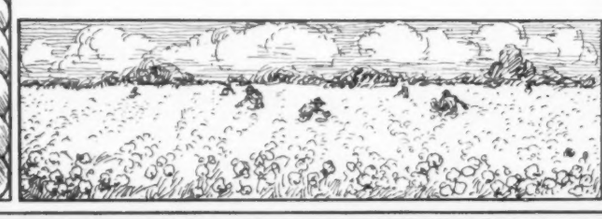
Specify Quissett Quality Yarns.

Carded and Combed Cotton Yarns in all Numbers and Descriptions.
Ply Yarns our Specialty.
Egyptians, Sea Island, Peelers, Sakelarides, Pimas and Peruvians.

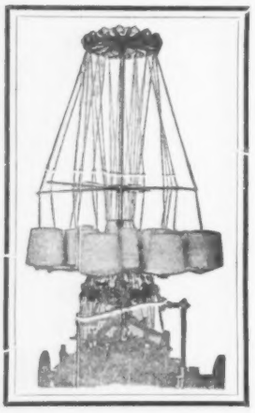
Quissett Mill
New Bedford, Mass.

Wm. M. Butler, Pres.
Edward H. Cook, Treas.
Thomas F. Glennon, Agent

QUISSETT MEANS QUALITY



ON bathing suit machines with stripers—let a Crawford keep the yarn from running into waste. When the yarn breaks out at the carrier, when a bunch, a knot or a loose end appears—see how quickly this stop motion brings the machine to a standstill. It's ideal for rayon cloth machines, too. Write.

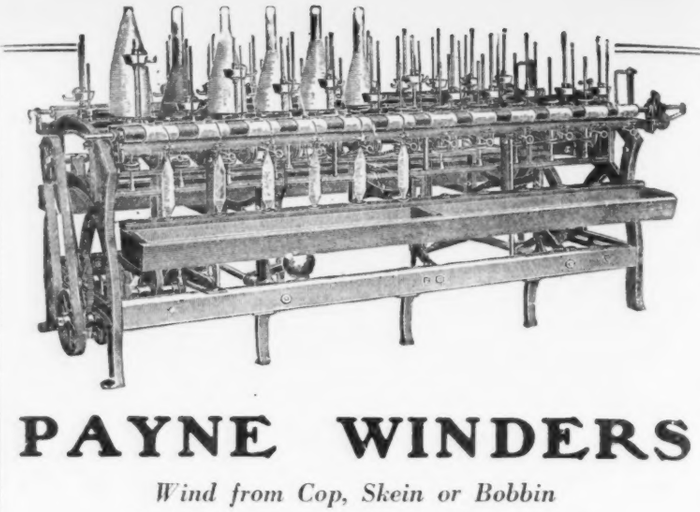


CRAWFORD STOP MOTION

E.O.B. Type

See also CONSOLIDATED TEXTILE CATALOG

The Crawford Mfg. Co.,
New Brunswick, N. J.



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Wind from Cop, Skein or Bobbin

Over 1,900 in use by Hosiery Manufacturers

IMPROVED UPRIGHT SPOOLERS

To Spool from Cop, Skein or Bobbin; Doubling Spoolers for Doubling two, three or more ends into one; Upright Quillers, Quill from Cop, Skein or Bobbin. Ring Dresser, Spooler and Reel Spindles, Cop Skewers, Spooler Guides, Bolsters and Steps Made and Repaired at Short Notice.

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Ask those who use them

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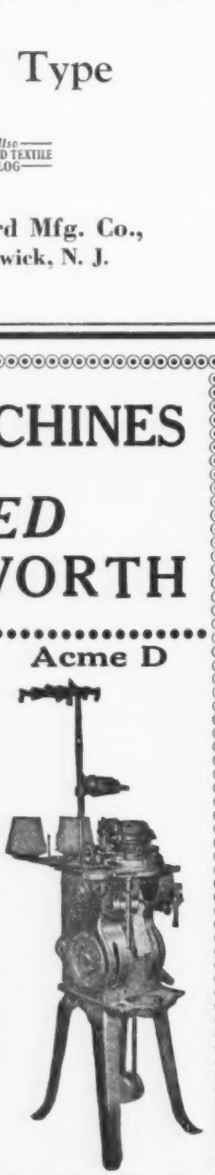
Acme D



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Spring and Latch Needle KNITTING MACHINERY

STANDARD FOR

Plain Ribbed, Circular and Flat Underwear
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Rib Cuff Cutting Machines
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SPRING AND LATCH NEEDLES

Spring Needle Rib Body Machine

SOLE AGENTS FOR CHINA

ELBROOK, INC., 51 Kiangse Road, Shanghai, China

Cotton—Continued

Broader Demand in South

Less General Interest but Unsold Stocks Decline

MEMPHIS, TENN., Feb. 28—Unsold stocks of cotton at Memphis and in the trade territory continue to decline, while demand has broadened as to kinds of cotton wanted although it is less general as to source. Most of the smaller shippers appear to be satisfied for the time being at least; demand, for practically every description, is attributed to a few large spot houses. The lowest priced cottons are keenly sought; this stuff, which is selling at 8 to 9c., is very trashy and heavily colored recent pickings. It is being readily absorbed as offered.

Shippers are experiencing difficulty in matching types, especially on the better grade staples; it is often necessary to comb the market to fill even small orders. No description is neglected, but demand is relatively best for strict good ordinary leaf, low middling to middling color. Shippers have been rather severely punished on these grades, and even now inquiry does not indicate that mills are willing to place any considerable amount of new business at prices that would show the shipper a profit. Cottons which could have been bought at 6½c., a short time ago are now bringing 9c. Gin run is selling at 8½c.

Sales were made during the week at the following prices: strict middling, fair color, 1 3/16 in. at 19c, strict low middling, rough, 1 ⅛ in. at 13c, gray and blue 12c, strict good ordinary, gray, 1⅛ in. at 10c, middling 1 1/16 in. at 15c, strict good ordinary, fair color, 1 1/16 in. at 11c, ordinary, very trashy and blue, 1 in. at 8c, ordinary and good ordinary, blue, 1 in. at 8¼c.

The unsold stock here, in factors' hands, estimated, is 90,000 bales against 129,000 bales last year. Receipts are again picking up in comparison with last year; this as a result of more favorable weather for picking. Field losses, due to the bad weather and delay in harvesting, were considerable but probably smaller than might have been expected.

Weather conditions last week were, on the whole, favorable for new crop preparations. Some planting was done. Plowing is fairly well advanced except in northwestern sections of the belt.

Staple Cottons Firmer

Advance Checks Demand—Egyptian Advance Partially Speculative

BOSTON, March 2.—During the closing days of last week there was a moderate amount of trading in low middling to middling staples of nearly all lengths, and it was possible to pick up small lots at minimum market prices and occasionally 25 to 50 points below. The advance in futures that followed the vetoing of the McNary-Haugen Bill cut off demand effectually, and instead of stimulating faith in the permanency of the advance has had the opposite effect.

Spinners who must have the longest staples find supplies small and prices stiff; No. 2 Pima is nominally quoted around 38c, although the Association is asking 40c for its small stock. Peruvian Pima, of which 5,000 to 6,000 bales were raised this season, and which had been available at less than similar varieties of Pima, is now cleaned up, but the next crop is expected to yield around 20,000 bales. High grade Sudan, which is also a competitor of Pima, is also practically cleaned up, although a little second grade may still be available around 35½c. High Grade Sak. is nominally quoted around 34 to 35c, but this season's crop is notoriously poor and it is therefore significant that English spinners who have bought Sak. against last season's types, are claiming and obtaining a cent a pound on practically all shipments.

Excepting for a moderate demand for medium Uppers little interest is shown by domestic buyers in the Egyptian market. Uppers have shown the greatest strength and the April option sold today as high as $19.75 and closed at $19.50, which was an advance of 64 for the week.

Current Quotations

Average prices for Mar.-Apr. shipment of middling and strict middling hard western cotton (Government lengths) are as follows:

	Middling	St. Middling
1 1/16 in.	18 to18½c.	19 to19½c.
1 1/16 in. to ⅛ in.	18½to19c.	19½to20c.
1 ⅛ in.	19 to19½c.	20 to20½c.
1 3/16 in.	21 to21½c.	22 to22½c.
1 ¼ in.	25 to26c.	27 to28c.

Basis on N. Y. May 14.49c.

John Malloch & Co., Boston, quote Egyptian cotton, c. i. f. Boston for Mar.-Apr. shipment as follows: Medium Sakellarides 27½c, up ½c. Medium Uppers, 21¾c, up ¾c, from Feb. 23. They report closing prices Mar. 2 on the Alexandria exchange as follows: Apr. Uppers $19.50, up 64c. Mar. Sak. $26.27, up 49c from Feb. 23.

Market Statistics

Basis Middling

	Saturday, Feb. 26	Saturday, Feb. 19
10 markets average	13.64	13.45
Memphis	13.25	13.25

Premium Staples

First Sales from Factors Tables at Memphis

Grade Strict Middling	Prices steady
1⅛-in.	16¼@16¾c
1 3/16-in.	19¼@19¾c
1¼-in. nominal	23 @24c

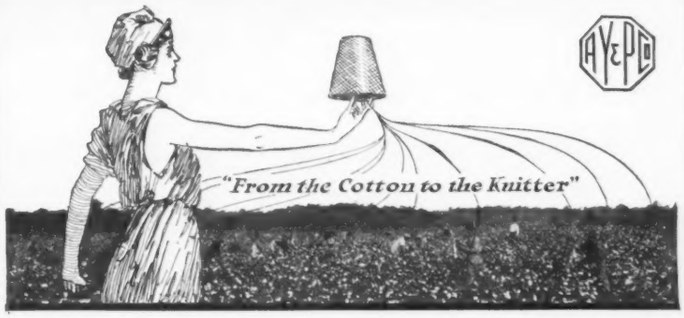
Current Sales

	For week	Prev. week	Week before
Memphis total	31,225	28,975	36,650
F. o. b. included	22,775	20,750	27,350
10 markets	160,842	92,865	133,848

Memphis Receipts, Shipments, Etc.

	For week	Last year	Year before
Net receipts	15,743	14,252	5,482
Gross receipts	56,276	38,303	29,202
Total since Aug. 1, net	660,797	657,887	388,788
Shipments	60,104	38,053	34,608
Total since Aug. 1	1,600,019	1,261,637	1,034,302
Total stock	267,545	294,187	86,031
Increase for week	*3,828	250	*5,406
Unsold stk in hands of Memphis factors	90,000	129,000	.....
Increase for week	*3,000	4,000	.....

*Decrease.



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AMERICAN YARN & PROCESSING CO.

General Office:
Mount Holly, N. C.

Spinners and Mercerizers

of

High Grade Combed and Carded Yarns

Our Mercerized Yarns are the Product of Our Own Mills

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52 Chauncy St., Boston, Mass.

DAVID WHITEHURST
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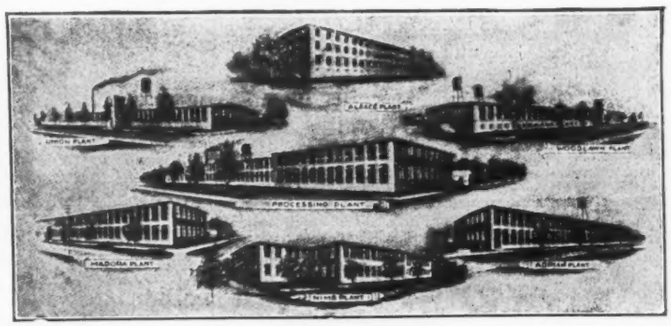
R. D. McDONALD
924 James Bldg., Chattanooga, Tenn.

THOS. S. TULEY
1318 McHenry St., Louisville, Ky.

G. C. ELLIS
Fairleigh Crescent, Hamilton, Ont., Canada



New York Agency: Metropolitan Bldg.

GRUNDY & CO., INC.

108 S. Front Street, Phila.

Tops and Worsted Yarns

FOR

Men's Wear, Dress Goods and Knitting
Trade both in Grey and Mixtures

THOS. WOLSTENHOLME SONS & CO., Inc.

Frankford Ave. & Westmoreland St. Philadelphia, Pa. P. O. Station "E"

UNDERWEAR HOSIERY
SWEATER WEAVING

YARNS

COLORS, OXFORDS
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French and English Spun Worsted
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Representatives: BOSTON—E. Geoffrey Nathan, 69 Prentiss St.
LOS ANGELES—Arthur Bone, 698 S. Rio St.
CHATTANOOGA—Campbell & Van O'Linda, 1023 James Bldg.

HORNER BROTHERS WOOLEN MILLS

Manufacturers of

Woolen

YARNS

For Knitters and Weavers

Almost a Century of Continuous Operation
Stands for High Quality and Prompt Service

EATON RAPIDS MICHIGAN

FOUNDED 1836

Harvey G. Rockwell, Selling Agent, 25 Madison Ave., New York

FRENCH SPUN MERINO

MOHAIR **WORSTED** WOOLEN

FRENCH AND BRADFORD

YARNS

OF EVERY DESCRIPTION

PERCY A. LEGGE

BOSTON PHILADELPHIA CHICAGO

THE KENT MFG. CO.

Clifton Heights, Pa.

WORSTED YARNS

French Spun

Chautauqua Worsted Mills

Jamestown, N. Y.

Manufacturers of WORSTED YARNS

(Bradford System)

FOR WEAVING AND KNITTING

White, Colors, Oxfords, Heather and Fancy Mixes

PASSAIC WORSTED SPINNING CO.

PASSAIC, N.J.

MANUFACTURERS OF

TOPS AND WORSTED YARNS

ENGLISH SYSTEM

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212 SUMMER ST. 120 CHESTNUT ST.
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YARNS

J. E. DUVAL
308 CHESTNUT ST.
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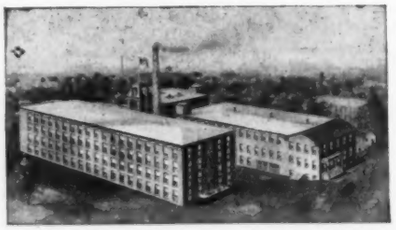
Incorporated 1904

FALLS YARN MILLS

WOONSOCKET
R. I.



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Sole Representative: H. R. SHIRLEY, 242 Chestnut St., Phila., Pa.

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WORSTED AND WORSTED MERINO YARNS

166 W. JACKSON BLVD., CHICAGO

Cranston Worsted Mills, Bristol, R. I.

WORSTED, MOHAIR AND NOVELTY **YARNS**

WILLIAM RYLE & CO.

381 Fourth Ave. New York
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Thrown Silk Yarns

For Silk, Woolen Worsted
Cotton and Knitting Mills

Star Worsted Company

YARNS

FITCHBURG MASS.

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WEBSTER, MASS.

Spinners of

FINE WOOLEN AND MERINO **Weaving Yarns**

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Rockwell Woolen Co.

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Manufacturers of

WOOLEN and MERINO **YARNS**

FOR WEAVING and KNITTING

Heather a Specialty Mixtures and Decorating Yarns

WORSTED YARNS

Fine Grades of Tops in Chief Call

Business in Short, Fine Dry-Combed Tops and in Standard Bradford Types

BOSTON.—The top market has not been loaded down with business this week; it is still difficult to get orders at prices that will show the comber a sufficient margin on present strong wool market. Deliveries on old contracts are being made steadily. The unfilled poundage is falling at a rapid rate and unless there is a change for the better in the next few weeks curtailment of operations will be in order. The new business placed during the week, all near the low edge of quotations following this market, was in fine and ½ blood both for French and Bradford spinners also in 58s and small quantities of 44s and 40s. There is demand in some quarters for a short dry-combed fine top which one producer quotes at $1.27 but in other places it is said that the commodity has been available as low as $1.22. This top is made on the French system for French spinners from domestic fine clothing wool.

In absence of any mill business of consequence the noil market is discussing woolen and worsted prospects for the year. Openings are now coming along thick and fast but worsteds seem to be taking the bulk of the business. From several sources comes the information that mills producing the choicer grades of worsted fabrics are busy, some of them working overtime. Some woolen mills however are doing good business but there has not yet been any large distribution of orders on woolen fabrics. Cheaper raw materials including medium noils may have a call later. The significance of this forecast so far as this market is concerned lies in the probability that, as a general proposition, the output of the finer grades of noils will be in excess of the probable demand.

Top and Noil Quotations

Tops—Boston		Nominal
Fine	(64–66s)	$1.38–$1.40
Super 64s Aus.		1.60– 1.65
Half-blood	(60–62s)	1.27– 1.28
High ⅝ blood	(58s)	1.15– 1.17
Aver. ⅝ blood	(56s)	1.08– 1.10
Low ⅝ blood	(52–56s)	1.02– 1.03
High ¼ blood	(50s)	.95– .97
46s		.87– .88
44s		.80– .82
40s		.77– .78
36s		.80– .81
Tops—Bradford		
Fine	(70s)	54d
Fine	(64s)	48d
Half-blood	(60s)	44d
Half-blood, low	(58s)	42d
Three-eighths blood	(56s)	34d
Quarter-blood	(50s)	26½d
Cross-bred	(46s)	21d
Noils—Boston		
Fine		$.78– $.80
Half-blood		.70– .73
High ⅝ blood		.63– .65
Aver. ⅝ blood		.60– .62
Low ⅝ blood		.57– .58
High ¼ blood		.53– .55
46s		.50– .51
44s		.48– .50
40s		.45– .47

Confidence in Future Activity

Goods Buyers Satisfied with Month's Business—Anticipate Good Spot Yarn Demand

PHILADELPHIA.

THE long period of quiet in worsted yarns, coupled with the now thread-bare "hand-to-mouth" buying habit, has led one of the larger factors to express the belief that not over 50% of the usual spring requirements have been placed for worsted yarns during the last five weeks. Finished goods buyers have expressed much satisfaction over the month just closed, and even with the steady runs of the larger weavers, local dealers and spinners believe that there is still enough spot business offering to warrant more confidence in future activity than was possible at the beginning of the year.

Wools Are Stable

The stability of the wool market as well as the apparent willingness of wool dealers of this locality to carry the inventory formerly in mill warehouses, both have aided materially in holding the market to the higher levels established two weeks ago. It is pointed out by dealers that the only difficulty remaining is the short-sighted buying of several consumers who insist upon seeking out yarns in volume for spot delivery as soon as they have received an order for goods; thus creating the irregular fluctuations that tend to speculation.

A peculiar condition faces the seller of worsted yarns. The Federal Reserve Bank reports that while prices are from 5 to 10% below those of this time last year, sales are a little ahead of last year's volume, and quiet prevails in the trade. Concessions, according to sales agents, have attracted no new business. The lower trend to quotations this quarter has been checked by the speculative rise in wools for June delivery, even though there seem to be sufficient supplies to carry production through at the present rate until the new clip comes to market.

Actual Inquiry Light

Inquiry during the past week was light, except for some fair business offering in single 30s French yarns, and a scattering of orders for 2-20s quarterblood knitting grades. Quotations remain unchanged, the basis of sale on 2-20s quarterbloods being about an average of $1.21 to $1.23. As the spinners have found a profitable business at around $1.25 for 2-20s heretofore, and with the buying spread over a longer period than usual, there are bright aspects to the next four weeks outlook.

Business in Yarns Slow

Deferred Goods Reaction and Strong Wool Control Market

BOSTON.—The worsted yarn market is encouraged by the general stability in evidence and by the movement of the goods openings toward completion. It is too much to say that there has been any very favorable reaction on yarn demand to date and it may be useless to anticipate any large and concentrated buying; but that there will be a steady increase of yarn buying later on seems a very general opinion. The market at the moment is lifeless and spinners are still under bearish pressure which they endeavor to pass over to the topmaker with little relief however from that quarter. January witnessed a slight decline in wool consumption and also a decline of 3.2% in worsted spindle activity but wool comb activity was unchanged from December. New York is placing its fabric business very slowly and in a fashion calculated to take the spirit out of manufacturers and spinners the ultimate object being, of course, to get fabrics down to a lower level. So far as this market is concerned it is based flatly upon the lowest prices at which wool can be obtained in a very stable market.

In the Bradford market wool is on the top and business in yarns is made difficult owing to inability of spinners to make prices which come any where near replacement costs. The action of spinners in resisting low offers for yarns has considerably modified the price-cutting which up to recently obtained in the effort to secure the limited business available. There is, however, still sufficient competition to allow consumers of yarns to obtain most counts and qualities at favorable prices. The fine worsted trade on men's wear, particularly for export, has improved, but the low woolen trade is badly off for business. Quotations following this market are unchanged for the week and for the entire month of February.

BRADFORD YARN PRICES

	s	d
2-16s, 36s	2	1
2-24s, 44s	2	4½
2-36s, 58s	4	3
2-48s, 64s	5	5
2-60s, 70s	6	8

WORSTED YARN QUOTATIONS

(Corrected to Close of Business Wednesday)

Bradford System

2-12s, low com. (36s)	1.05–1.10
2-16s, low com. (36–40s)	1.10–1.15
2-20s to 2-24s, low ¼ (44s)	1.10–1.15
2-20s to 2-26s, ¼ bld. (46–48s)	1.20–1.26
2-26s to 2-30s, ¼ bld. (48s)	1.30–1.35
2-30s to 2-32s, ¼ bld. S. A. (46s)	1.35–1.37½
2-32s, ¼ bld. (48–50s)	1.37½–1.40
2-20s, ⅜ bld. (56s)	1.35–1.40
2-26s, ⅜ bld. (56s)	1.40–1.45
2-36s, ⅜ bld. (56s)	1.50–1.55
2-32s, ½ bld. (60s)	1.70–1.75
2-36s, ½ bld. (60s)	1.75–1.80
2-40s, ½ bld. (60–64s)	1.80–1.85
2-50s, high ½ bld. (64s)	1.90–1.95
2-50s, fine, (66–70s)	2.00–2.05
2-60s, fine, (70s)	2.65–2 70

French System

20s, high ¼ bld. (50s)	1.45–1.50
20s, ⅜ bld. (56s)	1.45–1.50
30s, ⅜ bld. (56s)	1.55–1.60
30s, ½ bld. (60s)	1.70–1.75
40s, ½ bld. (60–64s)	1.85–1.90
50s, (66–70s)	2.10–2.15
60s, (70s)	2.70–2.75

Knitting Yarns in Oil (Bradford)

2-20s low ¼ bld. (44s)	1.10–1.15
2-18s to 2-20s ¼ bld. (50s)	1.22½–1.25
2-26s, ¼ bld. (50s)	1.28½–1.30
2-30s, ¼ bld. (50s)	1.32½–1.35
2-20s, ⅜ bld. (56s)	1.40–1.45
2-20s, ½ bld. (60s)	1.70–1.75

French Spun Merino White

30s, 50–50	1 30–1.37
30s, 60–40	1 42–1.45
30s, 70–30	1.54–1.59
30s, 80–20	1.65–1.70

Davis, Young & Anderson Sells for Kinney

Davis, Young & Anderson, Land Title Bldg., Philadelphia, and 10 High St., Boston, have been appointed sales representatives for Kinney Worsted Yarn Co., Pittsfield, Mass., spinners of worsted yarns. The latter concern is operating more actively than for some time past.

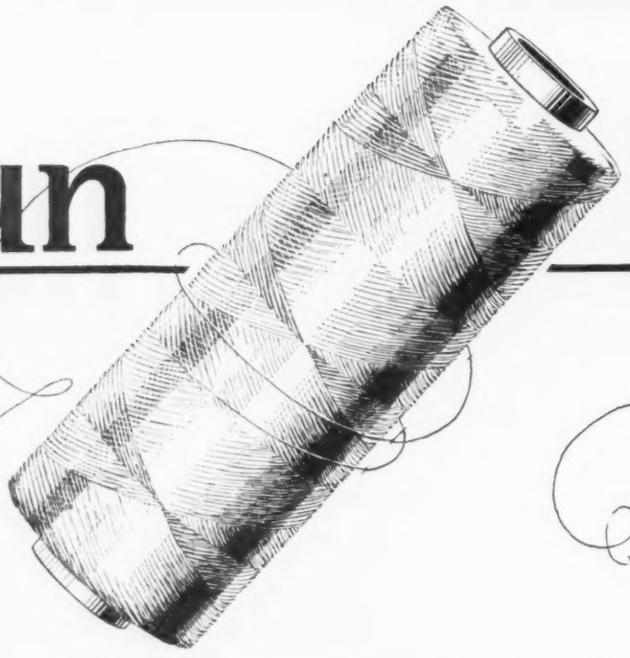
Roland F. King, formerly associated with King Worsted Co., Inc., Bridgeport, Pa., and with Crown Worsted Mills, Providence, R. I., is now connected with the Philadelphia office of Davis, Young & Anderson, as a member of their sales organization. Mr. King will assist in covering the trade in this market for them.

Supreme Court Hears Arguments in Wool Duty Case

WASHINGTON, D. C.—The U. S. Supreme Court heard arguments Feb. 24 in the Emergency Tariff Act clothing wool case on appeal taken by the Government from the decision of the U. S. Court of Customs Appeals. Edward P. Sharretts, of counsel for Stone & Downer Co., the importers, contended that the Customs Court was correct in its construction of the act, that the wool in question is not wool commonly known as clothing wool, but is combing wool. He pointed out that Congress in prior tariff acts had recognized the classification of wool as clothing, combing and carpet wools.

William W. Hoppin, for the Gov-

Spun Silk



PAY STREAKS

Resist,
Extra Fast
and
Regular
Dye
Colors

are not only miners' gold—you will find pay streaks of profit in worsteds and woolens decorated with AMERICAN SILK SPINNING COMPANY Colored Spun Silk Yarns. The cost is little considering the added selling value.

"Always Dependable—All Ways"

American Silk Spinning Co.
Providence, R.I.
New York Office – 1 Madison Ave.

Worsted Yarns—Continued

ernment, argued that the Customs Court had erred in holding that the wool, commonly and chiefly used in the manufacture of clothing, is not "wool, commonly known as clothing wool," the language of Paragraph 18 of the Emergency Tariff Act. He asserted that the lower court had failed to give due force and effect to the testimony introduced on behalf of the Government in aid of the common meaning of the term "clothing wool."

Represents Southern Worsted Corp. on Yarns

John I. Purdy, for several years connected with G. F. Landman & Co., Phila., worsted and woolen yarns, is now direct representative for the Southern Worsted Corp., Greenville, S. C., spinning Bradford weaving yarns up to 2-40s. He is making his headquarters at 3443 Ella St., Philadelphia. He is also handling both woolen and worsted yarns for knitting and weaving.

Buying Texas Wool

SAN ANGELO, TEXAS.—Contracting for sale of long spring wool continues throughout this section of West Texas. Prices range from 35c to 37½c, although some growers are holding out for 40c. The peak price for this section last season was 38c, and buyers do not believe that this mark will be exceeded this season. R. A. Halbert of Sonora sold 115,000 lbs. of long wool to H. C. Evans, representing S. Silberman & Sons of Chicago. In Sutton County, Joe B. Blakeney of San Angelo, buyer for Hallowell, Jones & Donald of Boston, bought 250,000 lbs. for 37½c. J. M. Lea and other buyers for Draper & Co. of Boston, also bought 250,000 lbs. for 37½c. The clip was sold by Bob Cauthorn of Sutton County, 150,000 lbs., and Ed Mayfield of Sutton County, 100,000 lbs. It was estimated that fully 4,000,000 lbs. of spring wool has been sold under contract before shearing.

Report on Canadian Wool Clip in 1926

MONTREAL, CANADA.—Final estimates for the wool clip of the Dominion for the year just closed place the total at close to 11,500,000 lbs. Of this amount around 5,000,000 lbs. were used locally, the bulk of the clip in Quebec and certain new Canadian settlements in the West never reaching commercial channels.

NEWTON, MASS. The Saxony Worsted Mills of the United States Worsted Corp. are running out stock preparatory to closing indefinitely. This follows recent announcement that the weaving department of the Uswoco plant of the same corporation is to be closed indefinitely. The other mills of the company that are still being operated are located in North Chelmsford, Lowell and Saugus, and the dyeing and finishing department of the Uswoco Mills, Lawrence, Mass.

Obituary

James S. McMaster, Jr.

James S. McMaster, Jr., for many years associated with the Berkshire Mfg. Co., Frankford, Philadelphia, died Monday, Feb. 28, in the Frankford Hospital, following an operation. Mr. McMaster, was 48 years old. He was widely known in the industry as well as the community in which he took an active part in civic affairs. Several years ago he resigned from the Berkshire Mfg. Co., and devoted his entire time to the Samuel F. Woodhouse Paint Co. He was also a leader in the organization of the famous Frankford Yellow Jacket football team, being a director in this organization, which was the first professional football team in Philadelphia. For 20 years he was treasurer of the Frankford Presbyterian Church. He is survived by his widow, and his father, James S. McMaster, Sr., with whom he had been associated for many years at the Berkshire Mfg. Co.

Alexander James

Alexander James, founder of the first cotton mill in Scotland (N. C.) county, the Scotland, and its first president, died after a long illness, Feb. 25 at his home in Laurinburg, N. C. Mr. James was president of the First National Bank of Laurinburg, which he organized in 1893. At his death he was a member of the board of trustees of Davidson college and had served on boards of the University of North Carolina, the State Hospital for the Insane at Raleigh, the State School for the Deaf at Morganton, and the Flora McDonald College at Red Springs. Surviving are his widow, his sons, Hinton, A. H., Dr. F. H., W. S., and M. P. James, Laurinburg, and Major A. L. James, Charlotte; and one daughter, Miss Pattie James, of Laurinburg.

Tribute to a Faithful Workman

WORCESTER, MASS., Feb. 18, 1927. "William A. Jones, employed for many years by the Johnson & Bassett Co., died last night." Such was the brief death announcement of Mr. Jones which appeared in last night's paper. His passing seems deserving of more than this casual notice. Mr. Jones was our oldest employe; he had been with us for more than fifty-seven years. He came to us in 1870, and his first job was his last job. What is the record for longevity of continuous service in one establishment in the City of Worcester; I do not know, but Mr. Jones must be well up among the seniors. From 1875 until about 1905 Jones was engaged in erecting our mules in various mills in all parts of the country, and he thus became well known to the spinners of the country. He was universally liked, and there was no more popular setting-up man than Jones in his time. For the last twenty years he had been employed in the shop. Any man who can point to a term of employment of nearly three score years with one concern is entitled, when he is through, to have said of him "Well done thou good and faithful servant." In these modern days such men are not born. God rest his soul.

By George M. Bassett, president Johnson & Bassett, Inc.

Pocasset Worsted Company, Inc.

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Office and Mills Thornton, R. I.

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Reg. U. S. Pat. Office

DU PONT RAYON CO.
BUFFALO, N. Y.

RAYON AND SILK YARNS

Rayon Imports Decrease

January Total Smallest Since August

Imports of rayon yarn during January were the smallest since last August. They totalled 699,821 lbs. valued at $616,907, as against 1,023,096 lbs. valued at $707,823 imported during December. The following table compares imports for recent years:

RAYON YARN IMPORTS, BY MONTHS

	1924 Lbs.	1925 Lbs.	1926 Lbs.	1927 Lbs.
Jan	251,951	205,627	597,103	699,821
Feb	132,717	619,408	643,448	.....
March	87,430	522,139	1,257,034	.....
April	89,444	431,686	739,247	.....
May	96,555	332,737	769,477	.....
June	144,664	308,592	857,912	.....
July	78,050	546,695	739,128	.....
Aug	119,196	590,357	661,759	.....
Sept	181,614	622,304	878,604	.....
Oct	170,120	825,223	995,315	.....
Nov	170,238	1,118,679	964,164	.....
Dec	190,008	877,064	1,023,096	.....
Total	1,711,987	7,000,521	10,126,277	.....

Imports of rayon waste during January totalled 637,374 lbs., as against 546,548 lbs. in December. Comparisons by months for recent years are given below:

RAYON WASTE IMPORTS, BY MONTHS

	1924 Lbs.	1925 Lbs.	1926 Lbs.	1927 Lbs.
Jan	313,750	704,031	584,460	637,374
Feb	394,942	575,415	218,883	.....
March	253,935	457,446	462,894	.....
April	261,409	393,433	332,068	.....
May	404,006	396,091	258,985	.....
June	276,480	271,357	205,859	.....
July	245,857	134,957	310,237	.....
Aug	251,654	313,603	635,435	.....
Sept	642,602	565,873	320,278	.....
Oct	815,860	575,543	326,126	.....
Nov	686,800	577,516	171,838	.....
Dec	810,859	410,908	546,548	.....
Total	5,358,154	5,376,173	4,363,611	.....

Imports of yarns made from waste during January totalled 25,854 lbs., against 6,787 lbs. in December. Comparisons follow:

IMPORTS OF YARNS MADE FROM RAYON WASTE

	1924 Lbs.	1925 Lbs.	1926 Lbs.	1927 Lbs.
Jan	3,271	16	1,937	25,854
Feb	427	5,984	31,142	.....
March	2,334	16,982	18,655	.....
April	3,362	26,194	15,782	.....
May	12,632	7,548	11,142	.....
June	1,175	.....	18,545	.....
July	5,508	34,171	29,103	.....
Aug	3,518	6,837	8,530	.....
Sept	119	9,046	15,906	.....
Oct	3,631	34,403	3,340	.....
Nov	10,817	6,202	3,400	.....
Dec	952	20	6,787	.....
Total	47,746	147,403	163,859	.....

The following table shows imports of rayon yarn during January, by countries of origin, and comparison with January:

Imported from —	January Lbs.	December Lbs.
Austria	10,912	41,706
Belgium	82,755	83,163
France	50,600	63,689
Germany	157,128	147,888
Greece	27,075	.....
Hungary	227	8
Italy	158,515	518,589
Netherlands	194,340	151,589
Switzerland	18,260	8,264
United Kingdom	9	8,200
Total	699,821	1,023,096

DRUMMONDVILLE, QUE., CANADA. Canadian Celanese, Ltd., expects to start up its weaving department about March 15, according to report.

Further Advance in Rayon

Finer Sizes Raised by Domestic Companies While Snia Yarns Are Also Increased

ADDITIONAL advances put through this week by both domestic and foreign makers of rayon contributed to the feeling of well being that is prevading the rayon market at the present time. The exuberance of the present state of affairs can be likened to the feelings of a convalescent who begins to feel the vitality of health coursing through his system following a protracted illness. Commenting on the advances, the head of one of the large companies stated that he did not believe the increases would be felt very much due to the buoyant condition of the market. In addition the Viscose Co. announced that it would not accept orders on any of their numbers for shipment beyond April 30 at present prices.

The rise in price put through by the domestic companies amounts to 15c per lb. on the "A" and "B" qualities of the 75 denier and 100 denier yarns. The 18 filament yarn of the Viscose Co. is affected and incidentally the new prices bring the levels up to within 5c a pound of what the market was before the reduction of last fall. The new price for the 75 denier is $2.45 for the "A" and $2.25 for the "B" quality. For the 100 denier yarn the price now is $2.05 for the "A" and $1.90 for the "B." The Tubize advance brings their 75s and 100s above levels ruling before the November cut.

Considered partly as a reflection of the recent working agreement between the various European producers, the advance in prices by the Commercial Fibre Co. for the Snia Viscosa is particularly interesting. The price rise amounts to 5c a pound in all grades and sizes with the exception of the 150 denier "A" and "B" quality which on this occasion also is raised 2½c a pound.

Admitting the vast improvement that has come over the rayon situation, the larger producers, it is understood, deprecate the talk of a boom. This was the pronouncement of one president last week and it would not be surprising if others felt the same. The statement by one company that it would not accept orders beyond April 30 is regarded in some quarters as a mistake. The inference is that another advance is contemplated on or before that date and if such is the case and the business justifies such an advance, then it is felt the announcement of such intention now will defeat its purpose. It might serve to create a very large and fictitious demand before that date for buyers would simply take in all they can, while the price is still low. Then, having bought, there would be a subnormal demand thereafter while mills use up the quantities they have on hand.

* * *

Viscose Co. Advances

The following table shows the new prices made by The Viscose Co. on 75s and 100s, and comparison with previous prices:

		"A"		"B"	
Den.	Fil.	Old	New	Old	New
75	18	$2.30	$2.45	$2.10	$2.25
100	18	1.90	2.05	1.75	1.90

* * *

Tubize Prices Now Higher Than Before November Cut

The advance of 15c per lb. on 75s and 100s made Monday by the Tubize Artificial Silk Co. of America brings the quotations on these sizes to a level 5c higher than that ruling before the November cut, with the exception of 75 denier "B," which is the same.

The following table shows the new Tubize prices, and comparison with the former levels:

		"A"		"B"	
Den.	Fil.	Old	New	Old	New
75	18	$2.25	$2.40	$2.05	$2.20
100	20	1.90	2.05	1.75	1.90

* * *

Snia-Viscosa Advances

The advances on Snia-Viscosa rayon, announced Monday by the Commercial Fibre Co. of America, increases all numbers by 5c per lb. with the exception of 150s A and B which are advanced 2½c. This was the second advance on Snia yarns made within five days. The following table shows the new prices, with comparisons:

Den.	"A"	"B"	"C"	"D"
150 (old)	$1.27½	$1.22½	$1.15	$1.10
150 (new)	1.30	1.25	1.20	1.15
200 (old)	1.20	1.15	1.10	1.07½
200 (new)	1.25	1.20	1.15	1.12½
300 (old)	1.12½	1.08	1.05	1.00
300 (new)	1.17½	1.13	1.10	1.05
450 (old)	1.12½	1.08	1.05	1.00
450 (new)	1.17½	1.13	1.10	1.05

Rayon Notes From Britain

(Special to TEXTILE WORLD)

There is a growing feeling that some amendment will be made in the silk duties upon the occasion of the forthcoming budget. It seems highly improbable that any material alteration will be made as the trade has just settled down after the disorganization following the imposition of the duties in 1925. They are not viewed with entire favor although sections of the silk industry have materially benefited. The fact that raw silk is taxed however to a large extent takes away the advantage gained by the manufacturers in having a duty on imported manufactured goods. The difficulties of applying a tariff such as this in a country where other textile goods such as cotton and wool are allowed to come in duty free, cannot be over-estimated. There is quite a likelihood of some change in the method of calculating the duty payable both in the form of customs and excise. The silk merchants and manufacturers are closely watching the situation and will place their views before the Government. In view of the financial loss to the treasury caused by the prolonged industrial troubles last year no reduction is thought to be possible.

* * *

The Branston Co., Ltd., who as recently advised have taken over a factory at Branston near Burton-on-Trent for the purpose of rayon manufacture, will be floated about the end

DOMESTIC RAYON PRICES

Denier	"A"	"B"	"C"
55	$2 45	$2.30	$2.20
65	2 35	2 15	2.05
75	2 40-2 45	2 20-2 25	....
80*	2.50	....	....
85	2.15	2.00	1.90
100	2 05	1.90	....
100*	2 15	....	....
120	1.75	1.65	1.55
125	1.70	1.60	....
125*	1.95	....	....
130	1.65	1.55	1.45
140	1.55	1.45	1.35
150	1.45	1.40	1.30
150*	1.65	....	....
170	1.40	1.35	1.25
170*	1.60	....	....
200	1.40	1.35	....
200*	1.60	....	....
300	1.25	1.23	1.20
450	1.20-1.25	1.20	....
600	1.15-1.25	1.20	....
750	1.15	....	....
900	1.15-1.20	....	....

* Multi-filament.

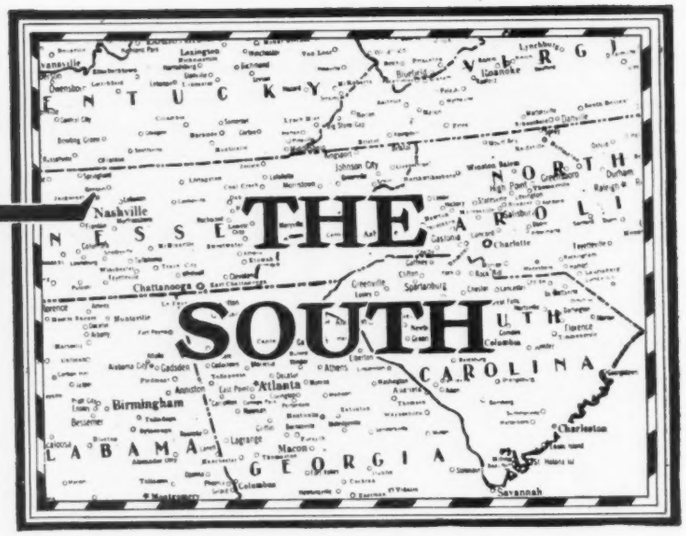
CELANESE

Denier		Denier	
45	$4.25	170	$2.85
75	3.75	200	2.75
100	3 65	300	2.70
150	2.90		

BEMBERG (Cuprammonium)

Denier	Filaments	Price
40	30	$4.25
60	45	3.65
80	60	3.50
100	75	3.25
120-A	90	2.90
120-B	90	2.35
150-A	112	2.50
150-B	112	2.15
180	135	2 30
240	180	2.25
300	225	2.2$_5$

In — THE SOUTH



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TELEPHONE: ASHLAND 7171

REPRESENTATIVES:

Wm. S. Waterman, Philadelphia, Pa. T. E. Hatch Company, Inc., Boston, Mass.
Cosby and Thomas, Charlotte, N. C. and Chattanooga, Tenn. Commercial Trading Corporation, Ltd., Toronto, Can.

SNIA-VISCOSA FACTORIES:

ITALY: Torino Cesano Maderno Pavia Venaria Reale POLAND: Tomaszow

Rayon and Silk Yarns—Continued

of February. The authorized capital is to be £2,000,000 and the amount to be issued will be £1,400,000, comprising one million ordinary shares of £1 each and one million deferred shares of 4/- each. The firm are taking over the rayon works formerly occupied by Grout & Co., and will thus be both producing and manufacturing. This procedure has many obvious advantages, but has not hitherto been practised in this country except in one unimportant case. There is always danger of alienating the manufacturing section of the trade. The ultimate output aimed at by the Branston Co. is 16 tons per day but a preliminary unit will be placed in operation first.

Spun Silk Firm

Market Is Firmer but No Spinners Raise Prices

Marked firmness in prices was a feature of the spun silk market last week. The recent rise in raw silk has called attention to the relative cheapness of spun silk which has not yet been advanced despite the fact that levels are nearly as low as any time in years. Buying was fairly active in both two ply and single yarns, principally for nearby deliveries. Some business was being placed on the heavier counts by worsted mills. Quotations are as follows:

(2%—30 days)

60—2.....	$5.40	40—2.....	$5.00
50—2.....	5.20	60—1.....	4.35

Thrown Silk Quiet

Prices Held Firmly but Buying Quiets Down

As a general rule the thrown silk market was quiet last week. This was a natural consequence of the rapid and substantial rise witnessed in the preceding two weeks for manufacturers find it difficult to obtain any increased prices on their merchandise and naturally hesitate to buy at a 35c a pound advance. Prices held rather firmly around the market notwithstanding the lessened interest. Here and there some houses made special prices, but most sellers appeared to consider the rise in the light of something permanent and did not push sales on a price basis.

In the Japan crepes 3-thd georgette found the best response. The 4-thd construction was quiet and the hosiery trade deferred operating on tram constructions. Three-thread Canton noted some buying but mills had difficulty in readjusting their ideas to the 30c advance particularly when they claim that it is useless to talk of any advances in finished merchandise.

(60 days basis)

Japan Organzine 2 thd Grand Double Eextra in skeins.....	$7.50
Japan Tram 3 & 4 thd in skeins...	6.60
Japan Tram 5 thd on cones.....	6.55
Japan Crepe 3 thd Crack XX on bobbins	7.35
Japan Crepe 4 thd Crack XX on bobbins	7.25
Japan Crepe 4 thd X on bobbins...	6.90
Canton Crepe 3 thd N S 14/16 on bobbins	5.40
Tussah Tram 2 end on cops.....	3.70

Raw Silk Stronger

Scarcity of High Grade Silk Noted in Local Market

Manufacturer buying was on a rather limited scale last week, being restricted for the most part to filling in purchases where the buyer had to have silk for spot or nearby delivery. This would be the natural outcome of the recent advance for mills claim that the present levels for merchandise do let them get the higher cost out of the raw silk. This may be an exaggeration but at the same time there is little incentive to operate for the future months and mills are holding themselves to a strictly hand-to-mouth policy as regards their raw silk.

Inquiry concerned itself mainly with Crack and Grand XX 13/15 white silk and the same grades in yellow 20/22s. Really good parcels seemed very difficult to locate and manufacturers found themselves forced to pay fairly stiff prices. An increased spread between the higher and lower grades in Yokohama also had its influence on the situation here. Canton silk was slightly softer for a few days due to reselling but firmed up later in the week.

(90 days basis)

Japan Filature, Grand Double Extra, 13/15..	$6.45
Japan Filature, Crack Double Extra, 13/15..	6.20
Japan Filature, XX, 13/15	6.05
Japan Filature, Best X, 13/15.....	5.85
Japan Filature, X, 13/15	5.80
Canton Filature, New Style, 14/16.....	4.15
Canton Filature, New Style, 20/22.....	3.95
Shanghai Steam Filature, "Three Dancers".	6.10
Tussah Filature, 8 cocoon.....	3.25

SUMMARY OF SILK CABLES

Best No. 1/X Yokohama	1460 Yen
Exchange at 3 m/s	49 5/8
Cost C. I. F. New York	$5.76

Indications of a much stronger situation abroad was seen in the action of the Yokohama market last week. Prices advanced 10 Yen to the basis of 1460 Yen for Best No. 1/X despite a light volume of buying in the open market. Transactions for the entire week amounted to only 2,500 bales and the 10 Yen rise in the face of the small inquiry points to a much improved feeling in Yokohama. The Bourse showed strength and advanced about 25 Yen with the future months in particular demand. The Canton market was somewhat quieter and cables indicated that the N S 14/16 size could be bought to slightly better advantage than a week ago. Other markets were quiet.

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1926
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A new feature of this edition is a section devoted to manufacturers of Rayon Underwear.

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WOOLEN RAGS
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Graded Linseys a Specialty

WOOL

Little Speculation in Substitutes

Mills Hand Bag To "Shoddy" Men Who Pass To Graders—General Avoidance of Stock

Mill purchasing of reclaimed wools is still unsatisfactory as to volume and there are no indications of any immediate change for the better. Hand-to-mouth purchasing has become an established habit all along the line. Mill consumers of recovered wools know quite well that their orders will be filled at any time with reasonable expedition and so are not particularly troubled about supply of these commodities. It is difficult to estimate the extent of the production of the industry as a whole but 60% would probably cover the situation. In woolen rags and clips it is the same story.

Recovered wool men are not afraid of the woolen rag market getting away from them and are allowing the "ragman" his traditional privilege of carrying the bag. An attempt partially successful is being made to increase export business on coarse, dark, cheap rags by lowering prices. Some coarse, dark merinos have been bought as low as 3c and fine dark merinos at 5c for shipment abroad. Mixed softs are slightly easier at 8c. Light hoods are quoted to consumers 23½c. Old blue worsteds are in fair demand at 8-8½c. Blue serge stocks are slow.

The English woolen rag market is very dull and prices are less firm. Black worsted clips have declined 5 shillings and fancy coarse stockings 2 shillings per cwt. Quotations of most rags and clips are nominal. Mills and graders are buying sparingly. Only fine quality rags and light colors are selling with any freedom. There is some importing of low grade American rags but it is supposed that these imports for the most part find their way to the Continent either in the rag or processed as "mungo."

The wool waste market is still comparatively inactive. Some business is done but insufficient to sustain the situation. The chief interest of the market is in threads, domestic fine as well as British threads are quoted 83-85c and for the best Continental threads which are better sorted and have less twist 90c is demanded. Garnetted wastes in several grades are in moderate demand, ⅜s blood selling around 75c, ½ blood at 85c and fine domestic 90c. There is more movement in silk waste. Demand is steady and met in part by imports. There is also a larger amount coming out of domestic mills for sale. Very attractive colored yarns are made from waste silk and silk waste and are used in producing fancy stripe effects in some of the woolen suitings.

Wool Consumption Trend Falling

Consumption and Population Moving Inversely—Raw Material Handlers Have Also to Carry the Big Bag

BOSTON.

AFTER several weeks of comparative inactivity during which time the various goods openings have occurred the balance of opinion on Summer Street forecasts larger mill purchasing in the near future. Consumption in New England since the first of the year has been about 45,000,000 grease pounds while shipments of wool from Boston covering dealers' sales and withdrawals from bond totaled about 35,000,000 lbs. In addition an unknown quantity goes out over the road by motor truck to points within fifty miles of Boston. These figures, incomplete and approximate only, indicate that the delivery of wool from the Boston district has been quite adequate to supply the full amount of raw material to the mills; and when it is further taken into account that manufacturers' holdings of wool December 31 were equal to approximately three and a half months consumption it becomes evident that there is no scarcity of wool from the mill standpoint.

The wool consumption trend in the United States is downward. Wool and population are moving inversely, the population increasing and wool consumption decreasing. General conditions in Europe suggest on the other hand that the minimum needs of the several populations have barely been met and that the strong and continued purchasing by Germany and France for home consumption as well as for re-export either as raw material or manufactured goods is evidence that the huge war vacuum has not yet disappeared. In the United States since 1923 there has been an approximate increase of 8% in the population but on the other hand wool consumption has decreased approximately 20%. Consumption of wool, grease basis, for concerns reporting, approximately 80% of total industry, for the month of January for the last six years was as follows:

1927	46,389,000 lbs.
1926	41,446,000 lbs.
1925	51,434,000 lbs.
1924	53,845,000 lbs.
1923	63,348,000 lbs.

Import statistics to date indicate a decline of interest on the part of American buyers whether for mill account or speculation in the primary markets. The wool trade bought excessively last year and manufacturers time and time again were able to acquire foreign wools from bond at less money than it would have cost them to import. If mills are banking on the wool trade repeating the mistakes of the past two years they may be surprised. The live question in these days is "Who is to carry the bag?" Handlers of all kinds of textile raw materials have been forced into a difficult position and while manufacturers are emerging from the post-war readjustment to changed conditions, handlers of raw materials are being forced by the same process of adjustment into a position where they must carry large stocks indefinitely and meet the market at any time at prices determined in chief by the consumer.

The situation of the wool trade is more hazardous than ever. Manufacturers will no longer carry unnecessary wool stocks. Of this attitude there can be little doubt. Mill stocks have been declining actually and relatively for the past five years. Manufacturers stocks December 31, 1926 were 47% smaller than in December, 1922, while dealer and pool stocks were only 24% smaller. The tendency is likely to continue and the great question for the wool trade to solve is how far it can go safely in acquiring foreign and domestic wools

Wool and Substitute Quotations

(Corrected at close of business on Wednesday)

WOOL

Ohio, Pennsylvania and West Virginia

Fine delaine	.45—.46
Fine clothing	.40—.41
½ blood	.45—.46
⅜ blood	.45—.46
¼ blood	.44—.45

California (Scoured Basis)

Northern, 12 mo.	.98—1.02
Southern, 12 mo.	.87— .90

Texas (Scoured Basis)

Fine 12 mo.	1.03—1.05
Fine 8 mo.	.87— .90

Pulled—Eastern (Scoured Basis)

A.A.	1.05—1.08
A-Super	.90— .93
B-Super	.83— .85
C-Super	.70— .73

Montana, Idaho and Wyoming (Scoured Basis)

Staple fine	1.10—1.12
Do. ½ bld.	1.00—1.02
Fine & fine medium	1.03—1.05
⅜ blood	.90— .92
¼ blood	.80— .82

Mohair—Domestic

Best combing	.75—.80
Best carding	.65—.70

Mohair—Foreign (In Bond)

Turkey Fair av.	.42—43
Cape Firsts	.43—45

Foreign Clothing and Combing (In Bond)

Scoured Basis—Cape:	
Super 12 months	.95—1.00
Super 10-12 months	.98— .92
Australian:	
70s	1.07—1.10
64s	.97—1.00
58—60s	.85— .90
Grease Basis:	
Montevideo:	
58—60s	.41—42
56s	.39—40
50s	.36—37
Buenos Aires:	
48, 40—44s	.29—30
58, 36—40s	.27—28

Foreign Carpet (Grease Basis in Bond)

China: Combing	.29—30
Szechuen ass't	.26—27
Cordova	.24—25
Scotch Black Face	.23—24
East India: Kandahar	.34—37
Vican'r	.40—44
Joria	.45—50
Aleppo	.36—37

SUBSTITUTES

Wool Waste

Lap—	
Fine White	1.10—1.12
Fine colored	.87— .90
Thread White Worsted—	
Fine	.80— .82
½ blood	.73— .75
⅜ blood	.65— .68
¼ blood	.53— .55
Thread Colored Worsted—	
Fine	.36— .38
½ blood	.38— .35
⅜ blood	.30— .33
¼ blood	.28— .30
Card—	
Fine white	.50— .53
Medium white	.38— .40

Old Woolen Rags

Merinos—	
Coarse light	7½— 8½
Fine light	17 —18
Fine dark	5 — 5½
Serges—	
Blue	7½— 8
Black	6 — 6½
Red	12 —13
Knit—	
White	42 —43
Red	16 —17
Light hoods	23 —24
Worsteds—	
Light	8½— 9
Blue	8 — 8½
Black	7½— 8

Wool Trade Rather Uneasy

Nervous Buying of Unshorn Wool in West—Imports Decline

Wool purchasing continues slow. Hand-to-mouth purchasing has become a fixed habit of the mill men. They buy only when they need material, leaving the wool merchant to carry the bag. Concessions in price seem to have no effect in bringing about larger purchasing. There is no trend whatsoever and the goods market situation is far from satisfactory for the manufacturer who is receiving a very limited amount of business on his new fabrics to date. The expectation that there will be large and concentrated wool purchasing by manufacturers in the near future seems without sufficient warrant. Mills usually discount the opening by buying largely before, not after the event. Steady non-spectacular buying for mill account is likely to be seen on Summer street, mills buying steadily of the several grades and qualities as cloth orders follow the goods opening. No large advance business has been received in the goods market but a steady stream of orders are likely to be seen as requirements become known. Some of the fine worsted mills have yet to show their goods. Stocks of cloth and of garments are not large but

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Southern Representative: Fred H. White, Independence Building, Charlotte, N. C.
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More level dyeings are obtained with economy of dyestuffs. Thorough degumming of previously dyed and finished goods are easily and cheaply performed.

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Has increased affinity of the cloth for the caustic liquor, gives better lustre, the mercerizing lye kept clearer and lasts longer.

FOR PRINTING
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Wool—Continued

adequate at the moment to the rather uncertain demand.

Summer Street is still awaiting the advent of the mill buyer. Spotty purchasing is going on in worsted, also in some of the woolen wools. Said a wool dealer, "Wool in the Boston market is a very reasonably-priced property." This is a very general opinion and confirmed by the situation in all the foreign markets. The New Zealand and South American markets are in the main higher than ours. American buying is spotty and limited.

The general wool situation the world over is developing in favor of the growers. This is confirmed in the United States by the early outbreak of contracting on an extensive scale with prices paid that the actual market position on old wools hardly seems to justify. In Australia sales are well ahead of last season and by the end of March the selling season will be practically over following which there will be six months in which very limited supplies will be available until new wools appear in late October. Contracting in the western field is slower. Approximately 60,000,000 pounds have been taken of the territory clip to date. The price trend has been upward and is now reaching a point where increased caution is observable, the wool trade having no intention of being landed with an immense amount of domestic wool that could not be sold on current market which is rather thin at the moment. A fair amount of contracting on the sheep's back has taken place in Montana where shearing is still many weeks away. Prices paid have ranged from 32-35c and in Wyoming 31-33c with similar prices paid in Idaho and slightly lower values made in Nevada. The Utah clip is said to be 65% sold. So far as actual delivery of new wool is concerned the season is opening very slowly, even the early shorn Arizona wools being behind schedule.

"As the season advances," says an English authority, "the chances of cheaper wool get less, for in Australasia supplies will be largely depleted about the end of March and in the Cape by the end of February."

Boston Wool Receipts

Receipts of domestic and foreign wools at Boston, also imports at Philadelphia and New York for the week ended Feb. 26, based upon data compiled by the Market News Service of Bureau of Agricultural Economics, Department of Agriculture, are as follows, in lbs.:

	Week Ended Feb. 26	1927	1926
Domestic	708,000	15,533,000	9,800,000
Foreign	6,590,000	31,327,000	49,147,000
Total	7,298,000	46,860,000	58,947,000
IMPORTS AT PRINCIPAL PORTS			
Boston	6,590,000	31,327,000	49,147,000
Philadelphia	2,074,000	14,487,000	7,842,000
New York	1,741,000	12,065,000	14,736,000
Total	10,406,000	57,879,000	71,725,000

Interest Still Slow

Wool Buyers Seek Spot Lots at Intervals

PHILADELPHIA. — With nothing startling in the way of contracting reported from the West, and with the aggregate sales of wool in the local market about level with previous weeks, interest in the trade is rather slow. Volume business has been uncertain, consumers seeking spot lots at irregular intervals according to their needs.

Mill activity and consumption show distinct signs of recession in this district. Factors believe that the general decrease of approximately 4%, the average given by the Department of Commerce for the decline in activity for January from December, can be estimated for Pennsylvania at about 6%.

Dealers Hold Prices

Local dealers are still stressing the desirability of holding prices to the present range. The reported advance in growers' ideas of contract prices has obviously dampened the speculators, and an easier tone is expected.

It is pointed out that an unsound condition can result from the great volume of territory wools, estimated at close to 65,000,000 pounds, offering for June, with the great possibility of a considerable bulk of the 1926 clip remaining unsold, and a constant replenishment of supplies of foreign wools.

On the other hand, it has been said that the domestic wool has been favored by the advance in foreign markets without unusual American support, and that the burden of supplies for the next year will fall on the domestic clip.

Spinners have again asserted that under no circumstances will it be necessary for them to cover in volume before late May. By that time, they state, fresh supplies of domestic fleeces, as well as foreign wools from the current Australian sales will be available. In a survey of this situation, the Corn Exchange Bank of Philadelphia points out that Australia will have one of the biggest clips in its history, with over 100,000,000 sheep officially counted for the 1927-28 season.

Carpet Wools Quiet

Carpet wools have remained quiet. No volume business has been done in over a month, and prices hold firm. Mills continue to operate at about 55% of capacity, and unfilled orders insure this rate of operation for an average of nearly four weeks. Demand for carpets has been less active than at this time last year. Spring business has not really started as yet, and buying for immediate needs is increasingly the practise in the trade so that manufacturers are adjusting operations to it.

Carpet wool imports continue at normal rate despite the apparent lack of market interest.

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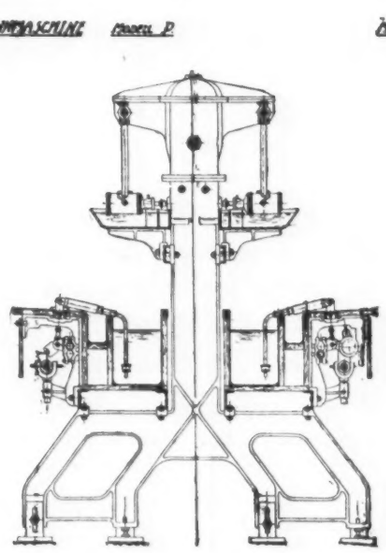

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A Boss Finisher's Worries

How often the Boss Finisher has trouble with his fulling and washing. For some reason he fails to get the proper action on the grease and wool material. The grease will not saponify.

Had he used one of the

Wyandotte Quality and Service Textile Alkalies

saponification would have readily taken place and no problem would have arisen.

The Wyandotte Textile alkalies will readily saponify the grease in the fulling, thus preparing the cloth for a perfect elimination of all impurities in the washes.

Give our technical expert an opportunity of advising with you on the prevention of all future trouble in your finishing department.

Ask your supply man or write our technical expert.

The J. B. FORD CO., *Sole Manufacturers,* Wyandotte, Mich.

DYESTUFFS AND CHEMICALS

Reverses Appraisers' Judgment on Dye Value

WASHINGTON, D. C.—The U. S. Court of Customs Appeals in a decision rendered Feb. 24 reversed judgment of the Board of General Appraisers, now the U. S. Customs Court, with regard to the value for dutiable purposes of Benzo Red 12B, a coal tar product imported by Kuttroff, Pickhardt & Co. The product was appraised at $2 per pound, based upon the American selling price of a domestic product. The single general appraiser affirmed the appraised value. The board agreed with the single general appraiser as to the correctness of the basis of his appraisement but found the value to be $7 per pound. The Court of Customs Appeals held that the United States value of the merchandise should have been determined by the single general appraiser and accepted as the correct dutiable value. Associate Judge Bland read the court's opinion.

DANVILLE, VA. Nearly 5,000 workers in the Riverside & Dan River Cotton Mills last week drew their first economy dividend in three months. Under the policy of industrial economy certain savings effected by the workers through the curtailing of inferior goods and seconds rebound to their advantage. The amount of the economy dividend could not be learned.

Chemical Education Body

Plans for Institute Include Industrial Department to Hold Close Practical Contacts

ESTABLISHMENT of a National Research Institute for Chemical Education with an initial endowment of $2,000,000 is planned by the Senate of Chemical Education of the American Chemical Society, according to an announcement by the Chairman of the Senate, Prof. Neil E. Gordon of the University of Maryland.

"The Institute should be located at some university which is doing work of a high order in both chemistry and education, but should be organized separately from either of these divisions," says Prof. Gordon's announcement, made following conferences with members of the Faculty of Teachers College and other educators.

"Its sponsors contemplate that it shall be the great meeting place for the chemistry teachers of the world and that it shall enable chemical education to be of vastly greater service to industry. The idea of the Institute arose from the needs of this ever-changing science."

The charter, it is planned, will provide for a board of seven trustees, a board of seven scientific advisors, a general director, associate directors to head the departments, and research assistants. Five departments, including graduate, undergraduate, industrial, high school, and historical, are proposed.

"The Industrial Department," the announcement states, "should be headed by an industrialist of recognized leadership—a man who has a general knowledge of all the leading industries and is able to see the parts which should be placed in our industrial chemistry curricula, and the parts which should be woven in by way of applications in our different chemistry courses.

"There should be miniature model industrial plants where the teachers could have a chance to get an idea of the working of all the leading industries and the various steps in the different processes.

"Plans should be developed and promoted for bringing about a closer cooperation between the industries and universities, and for keeping industrial men in constant training. Chemical engineering education should be given more attention."

The tentative budget to be presented to the Senate calls for the employment of a general director and of five departmental directors at salaries of $10,000 each. Five fellowships of $1,000 each are proposed, and provision is made for extra summer faculty lecturers at an expenditure of $5,000. The estimated cost of the building to be occupied by the Institute is $500,000.

Color Harmonies for Spring and Summer

A chart of color harmonies for spring and summer, arranged by Margaret Hayden Rorke, managing director of the Textile Color Card Association, New York, has just been issued to the members of the association.

Mrs. Rorke has chosen as the fashionable spring colors, blues, beiges, grays, greens, and rose and red shades. She also includes mauve and violet tones and black and white combined. For evening colors, she has selected white, cream, flesh, pink, blue, yellow, green, orchid and gray, "all delicate in tone." Also brighter shades of rose and red. All black, and white combined with black. The modish sport colors she considers to be rose, yellow-orange, red, pale beige and natural kasha shades, as well as all the delicate hues listed

Miscellaneous Chemicals

Alumina Sulp. com.	1 40 — 1 45
Iron Free	2 00 — 2 05
Alum. Ammonia Lmp.	3¾— 3½
Potash, Lump	2¾— 3½
Ammoniac, Sal. white gr., dom.	5½— 6½
Bleach powder, per 100 lb. works	2 00 — 2 40
Blue Stone	4¾— 5
Calcium Arsenate	7½— 8
Chlorine, Liq. Cylinders	5½— 9
Tanks	4 — ...
Copperas, ton	13 00 —19 00
Cream of Tartar	20½— 21½
Epsom Salts, 100 lb.	1 25 — 1.90
Formaldehyde Spot	11½— 12
Glauber Salts, 100 lb.	90 — 1 15
Glycerine (C. P.) bbls.	30 — 32
Cans	31½— 33½
Yellow Crude	30 — 32
Hydrosulphite Conc	24 — 25
Lead—Brown acetate	13 — 13½
White (crystals)	14 — 14½
Lime, acetate, 100 lb.	3 50 — ...
Potassium—Bichromate	8 — 8¼
Chlorate crystals	8 — 9
Permangan, tech.	14 — 14¼
Sodium acetate	4¾— 5
Bichromate	6½— 6¾
Bisulphite, 35%	1 50 — 1 75
Nitrite	8½— 9
Phosphate	3¾— 4¼
Prussiate, yellow	11½— 12
Sulphide, 60% fused.	3½— 4
30% crystals	2¼— 2½
Tartar emetic, tech.	29 — 31½
Tin—Crystals	47 — 47½
Bichloride, 50 deg.	20 — ...
Oxide, bbls.	72 — 74
Zinc Dust	9½— 10

Acids

Acetic, 28% per 100 lb.	3 37½— 3 62½
Citric crystals	45 — ...
Formic, 90%	10½— 11
Lactic, 22%	5½— 7
Muriatic, 18 deg. per 100 lb. in tank cars.	85 — 95
Nitric, 36@42 deg. per 100 lb.	5 00 — 6 75
Oxalic	11 — 11¾
Sulphuric, 66 deg. per ton in tank cars	15 00 —16 00
Tartaric	27½— 28

Alkalies

Ammonia, aqua, 26 deg.	2¾— 3¼
Borax, Crys. bbls.	4½— ...
Potash, carbonate, 80–85%	5¼— 6
Caustic, 88–92%	7¼— 7⅝
Soda Ash, 58% light	1 37½— 2 44
Contract, 100 lb.	1 32½— 1 57½
Bicarb, per 100 lbs.	1 90 — 2 25
Caustic, 76% per 100 lb.	3 10 — 3 90
Contract, 100 lb.	3 00
Sal, 100 lb.	90 — 1 00

Natural Dyes and Tannins

Fustic; Crystals	18 — 22
Liquid, 51 deg.	9 — 10
Gambier, liquid	12½— 13
Hematine, crystals	14 — 18
Hypernic Ext.—51 deg.	11 — 15
Indigo—Madras	1 30 — ...
Logwood Extract, liq. 51 deg.	8 — 10
Crystals	14 — 18
Osage Orange, Extract, 51 deg.	7 — 7¼
Quercitron extract, 51 deg.	6 — 6½
Sumac. Ext. dom., ref., 51 deg.	6½— 7
Extract, stainless	10 — ...
Tannic Acid, tech.	35 — 40

Dyestuffs and Intermediaries

Alpha Naphthol, ref.	80 — 85
Crude	60 — 65
Alpha Naphthylamine	35 — 37
Aniline Oil	15 — 17
Salt	24 — 25
Beta Naphthol, sublimed	55 — 60
Technical	22 — 24
Dimethylaniline	32 — 34
Metaphenylene Diamine	90 — 95
Paranitraniline	52 — 53

Oils and Soaps

Castor Oil, No. 3	12 — 13
Olive Oil, denatured, gal.	1 20 — ...
Foots	8½— 9
Red Oil, lb.	9 — 10½
Stearic Acid, double presses	12 — 13½
Turkey Red Oil, 50%	10 — 12
Tapioca flour	3½— 5½

Adhesive and Sizing Materials

Albumen, blood domestic	45 — 55
Dextrine-Potato	8½— 9
Corn, bags 100 lb.	4 07 — 4 12
Do. bbls., 100 lb.	4 34 — 4 39
Gum, British, 100 lb.	4 37 — ...
Do. bbls.	4 64 — ...
Sago flour	3½— 4
Starch, corn, 100 lb.	3 32 — 3 42
Do. bbls.	3 59 — 3 69
Do. thin boiling, bags, 100 lb.	3 92 — 4 02
Do. bbls.	4 19 — 4 29
Potato	6½— 7½
Rice	9 — 9½
Wheat	6½— 8

Coal Tar Dyes

Direct Colors—	
Black (H-acid)	28 — 35
Black Columbia FF.	50 — 60
Blue, 2 B.	24 — 32
Blue sky, ordinary.	60 — 80
Blue, 2 GL.	2 00 — 2 50
Blue, 4 GL.	2 25 — ...
Blue Sky, FF.	95 — 1 50
Blue, Fast RL.	1 90 — ...
Blue, Solamine	2 00 — ...
Benzo Azurine	75 — 80
Brown, C.	40 — 60
Brown, M.	70 — 90
Brown, Congo G.	85 — ...
Brown, Congo R.	80 — ...
Green, B.	60 — 90
Green, G.	65 — 90
Orange, Congo	60 — ...
Orange, Fast S.	1 70 — ...
Red, Fast F.	80 — 90
Red, Congo	40 — 50
Benzo Purpurine, 4 B.	40 — 60
Benzo Purpurine 10 B.	1 25 — 1 50
Scarlet, 4 BA.	1 50 — ...
Scarlet, 4 BS.	2 10 — ...
Scarlet, 8 BS.	2 15 — ...
Scarlet, Diamine B.	1 65 — ...
Violet N.	1 10 — 1 20
Yellow chrysophenine	60 — 1 30
Yellow, Stilbene	90 — 95
Developing Colors—	
Black, BH	40 — 60
Black Zambesi	... — 90
Bordeaux, Dev.	2 50 — ...
Orange, developed	2 50 — ...
Primuline	1 00 — 1 15
Red, Dev. 7 BL.	2 50 — .
Scarlet, Dev.	2 50 — ...
Sulphur Colors—	
Black	14 — 24
Blue, cadet	90 — 95
Blue, navy	50 — 60
Brown	20 — 60
Green	55 — 1 50
Green, olive	25 — 50
Yellow	45 — 50
Basic Colors—	
Auramine	90 — 1 00
Bismark Brown	50 — 60
Chrysoidine	40 — 65
Fuschine crystals	1 50 — 1 75
Malachite green	1 50 — ...
Methylene blue	1 10 — 1 25
Methyl violet	80 — 1 15
Rhodamine B. extcone	5 50 — 6 00
Safranine	1 45 — 1 60
Victoria Blue B.	3 10 — ...
Acid Colors—	
Naphthol blue blk.	35 — 60
Napthlamine black 4 B.	50 — 55
Alizarine saphirol	2 75 — 4 00
Alkali blue	3 25 — 3 50
Indigotine	75 — 1 30
Induline (water soluable)	75 — 80
Soluble Blue	3 00 — 3 75
Sulphoneyanine	70 — 95
Sulphone Blue R.	60 — 95
Patent Blue A.	2 85 — ...
Rescorcin brown	80 — 90
Guinea green	1 00 — 2 20
Wool green S.	70 — 1 70
Orange II	24 — 30
Orange GG crys.	60 — ...
Acid Fuchsine	80 — 90
Azo eosine G.	65 — 82
Crocein scarlet	1 15 — 1 30
Fast red A.	50 — 65
Azo yellow	1 35 — 1 40
F. Light Yellow 2 G.	2 00 — ...
F. Light Yellow 3 G.	1 00 — 2 50
Naphthol, yellow	1 35 — 1 40
Chrome Colors—	
Alizarine Black B.	2 00 — ...
Diamond Black PV.	70 — ...
Chrome Blue Black.	40 — 50
Chrome Brown	60 — 1 25
Chrome Green	75 — 1 50
Chrome Yellow	45 — 1 10
Indigo—	
Synthetic 20% paste.	14 — 14½

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Red Prussiate of Potash	Copper Sulphate
Aqua Ammonia	Sal Ammoniac
Thiourea	Lead Acetate
Dicyandiamid	Zinc Dust

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Dyes and Chemicals—Continued

under evening colors and white and black combined.

The "Chart of Color Harmonies" shows the shoe and hosiery colors which combine with the millinery and garment shades. Mrs. Rorke suggests artistic color ensembles such as a blue gown, gray and violet in cast, shell gray shoes and moonlight gray hosiery. With the rosy beige tones, she advises pastel parchment shoes and pearlblush or sandust hosiery. Sandust is a mauvish tan. Spanish raisin shoes may be worn with a gray costume, according to this chart. Stone, rose blush and pastel parchment shoes are selected for gowns of the rose shades with hosiery of flesh, pink, atmosphere, champagne or pearlblush.

All the colors indicated on the chart are taken from the 1927 spring color card of the Textile Color Card Association and from the shoe and hosiery 1927 cards of that association.

Dunker & Perkins Business Merged With Klipstein

Effective March 1, the dyestuff business of the Dunker & Perkins Co., Boston, merged with that of A. Klipstein & Co. The Boston offices of the latter company have been removed from 283 Congress Street to 263 Summer Street.

Charles H. Dunker and his associates have joined the Boston staff of A. Klipstein & Co. The same agencies and facilities maintained by Dunker & Perkins Co., with ample stocks for immediate delivery, and laboratory service, will be continued.

It is felt that the enlarged organization and the combined knowledge and experience of the two companies, gained through many years of contact with the industries served, mean increased effectiveness.

Activity of Wool Machinery in January

WASHINGTON, D. C.—The Department of Commerce has announced statistics on active and idle wool machinery for January, 1927, based on reports received from 919 manufacturers, operating 1,096 mills. This is exclusive of 9 manufacturers, operating 17 mills, who failed to report for the month. The accompanying table gives percentages of the total number of machines in operation some time during the month of January, 1927, and the active machine and spindle hours with usual comparisons:

Month	Looms: Wider than 50 in. reed space	Looms: 50 in. reed space or less	Looms: Carpet and rug	Looms: Sets of cards	Looms: Combs	Looms: Woolen	Spinning spindles: Worsted
PER CENT ACTIVE OF TOTAL NUMBER OF MACHINES							
Jan., 1927	65.7	69.1	66.2	73.5	71.9	70.2	73.9
Dec., 1926	69.6	70.8	66.7	78.7	72.7	75.7	77.4
Jan., 1926	65.5	71.0	73.1	74.3	74.4	69.3	71.7
PER CENT ACTIVE OF TOTAL HOURS (MAXIMUM SINGLE-SHIFT CAPACITY)							
Jan., 1927	67.9	64.6	65.2	75.4	83.9	71.7	74.6
Dec., 1926	71.5	66.9	65.4	80.0	83.7	76.6	78.0
Jan., 1926	67.4	62.6	68.4	77.2	84.7	72.3	72.0

Obituary

Melvin O. Bailey

Following illness of five months, Melvin O. Bailey, superintendent of the Hopkins Machine Works of Bridgeton, R. I., died at his home in Pascoag, R. I., Feb. 27, in his 73rd year. Born in Douglas, Mass., he entered the employ of the company at the age of 20, and remained with them his whole life. He was considered an authority on woolen and worsted dyeing machinery. His widow, two sons, a sister and six grandchildren survive.

John P. Turner

John P. Turner, prominent identified with textile manufacturing interests at Amsterdam, N. Y., died last week at his home in that city. He was head of J. J. Turner & Sons, industrial contractors, which have aided considerably in promoting industrial growth at Amsterdam. He personally supervised the erection of recent additions at the Mohawk Carpet Mills and S. Sanford & Sons. He was prominently identified with several financial institutions.

John H. Love

John H. Love, an overseer in a Philadelphia mill, died suddenly in that city on Feb. 25, aged 49 years. He was a former resident of Ware, Mass., where he was employed by the George H. Gilbert Mfg. Co. and had followed that line since leaving Ware. The funeral was held in Philadelphia on Monday.

Patrick Shanley

Patrick Shanley, for many years a prominent figure in textile manufacturing at Utica, N. Y., died at his home after a brief illness. He retired from active duty several years ago after 27 years of steady employment with the Utica Steam & Mohawk Valley Cotton Mills during which he was employed in an executive capacity.

George W. Dry

George W. Dry, aged 52, burgess of Topton, Pa., died in a hospital at Reading after a long illness. He was connected with the selling agencies of two Reading firms, Leinbach Bros. and the A. J. Brumbach Pants Co. and a Malone, (N. Y.), house, the Lawrence Webster Co., for many years, traveling from coast to coast.

Thomas Oliver Howe

Thomas Oliver Howe, aged 66, secretary treasurer of the Rock River Cotton Co., Janesville, Wis., which he with his brother, Fred, founded 30 years ago, died on Feb. 23. He leaves a widow and one daughter, Mrs. Hazel Jeffries of Winnetka, Ill.

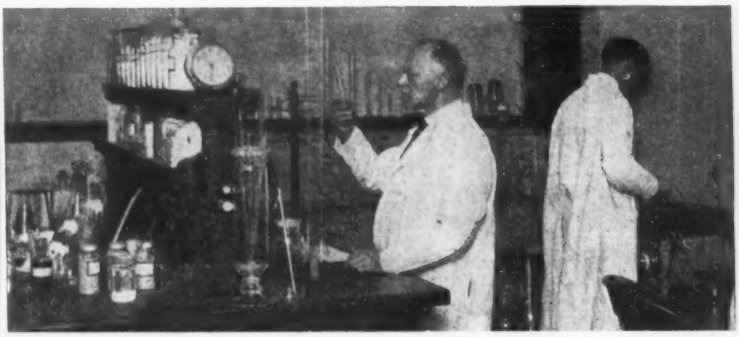
W. H. Bolen

W. H. Bolen, overseer of dyeing for the Grantville (Ga.) Hosiery Mills, died recently at the age of 60 years. He had held that position for the last seven years.

Frank S. Forry

Frank S. Forry died at an advanced age in Reading, Pa. For many years he was engaged on a large scale in hosiery manufacture in Myerstown, Pa.

The HALL-MARK Line



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